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JUNE 1973

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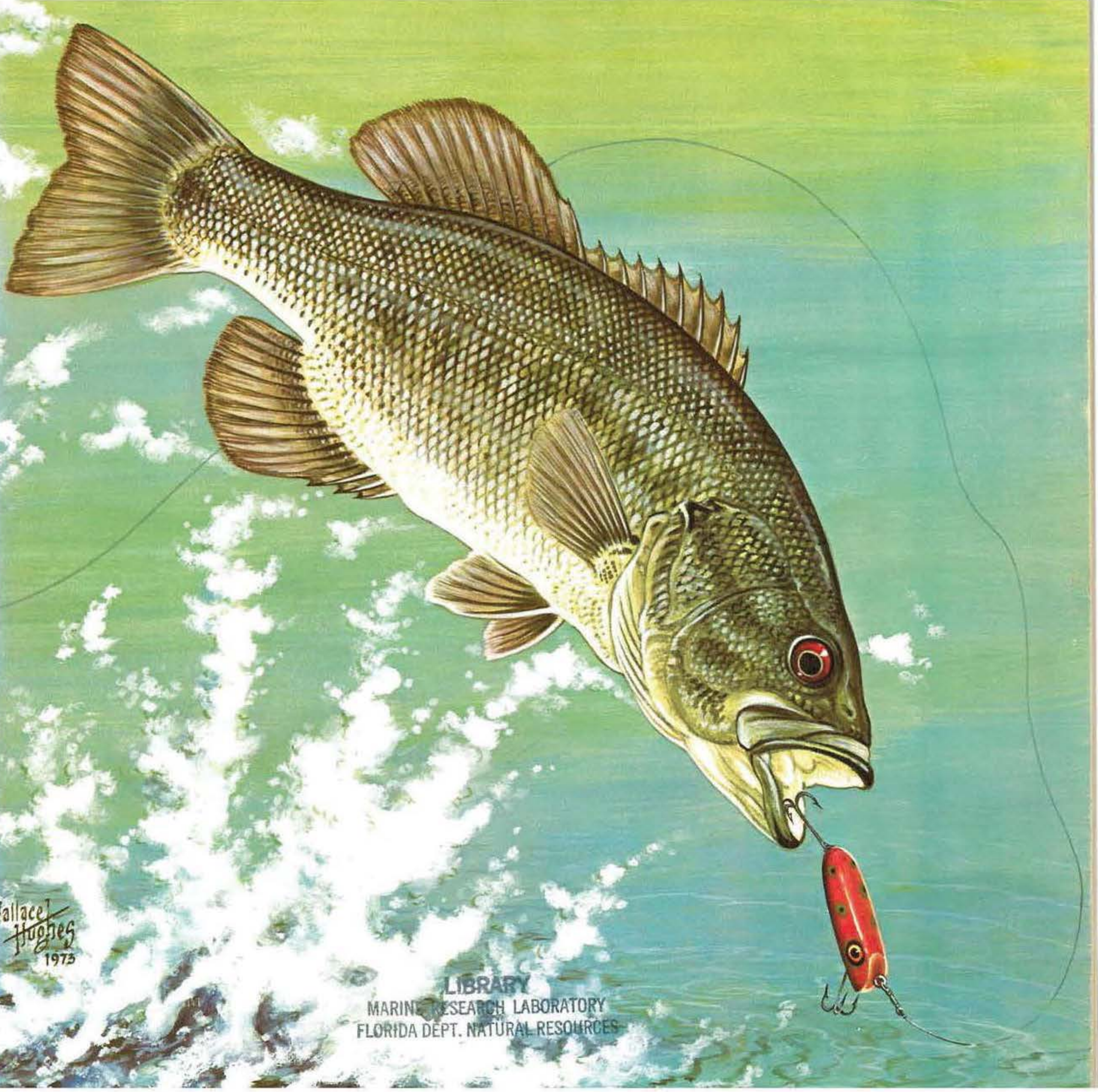

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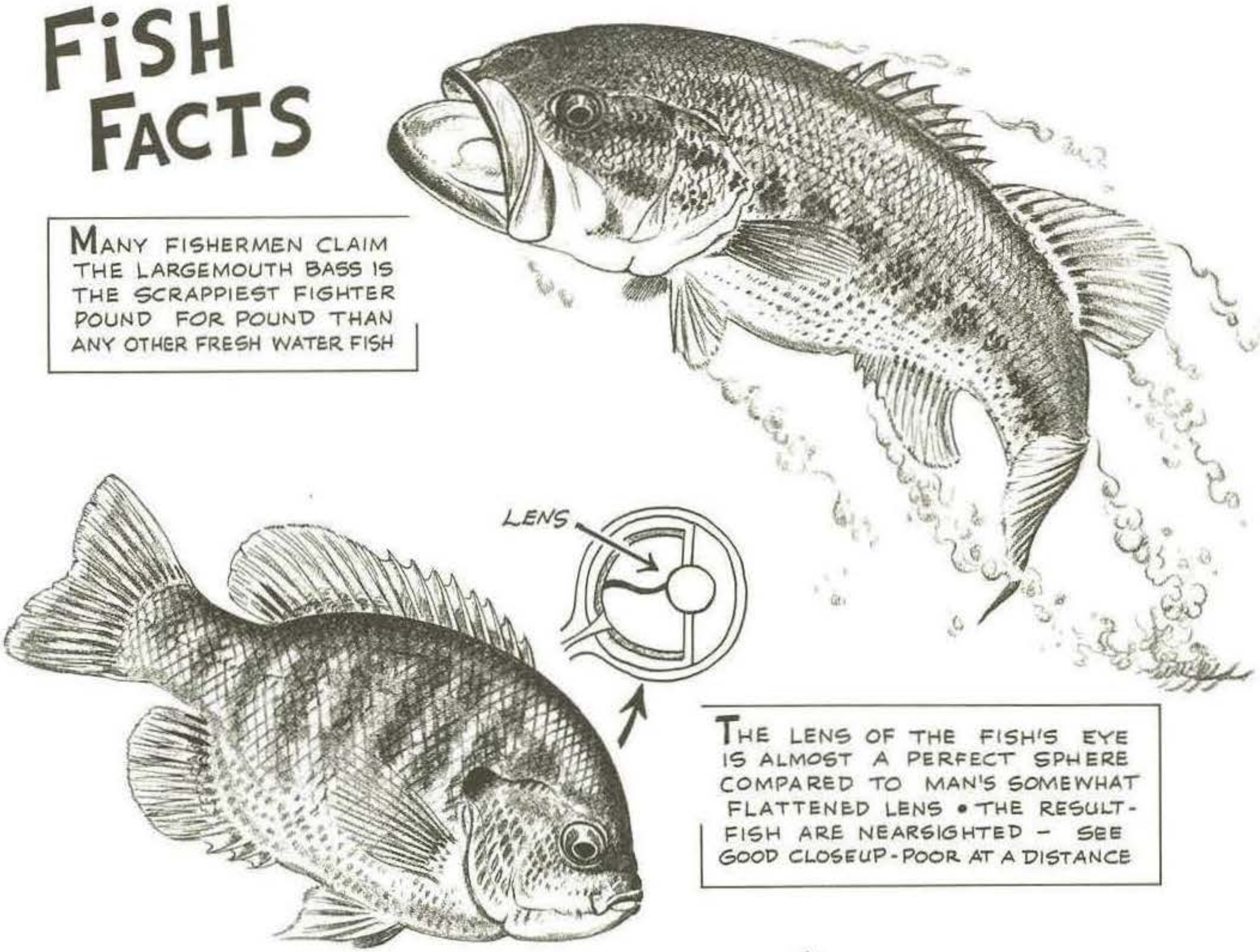
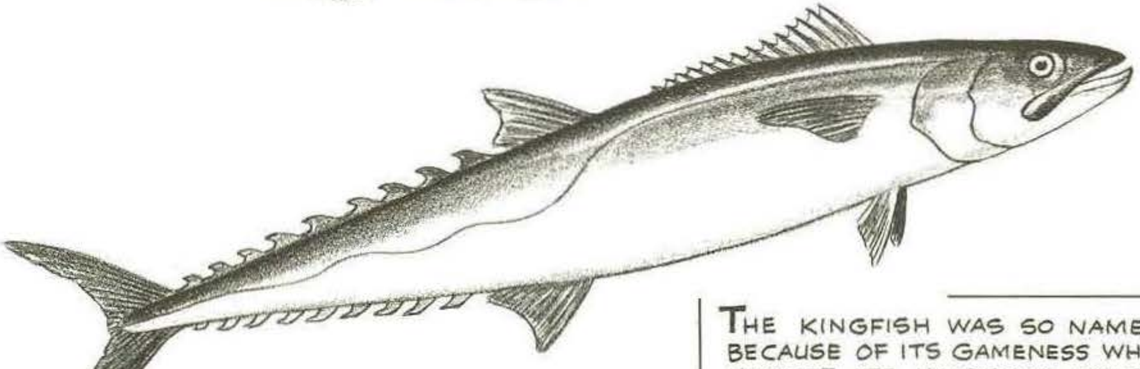


MANY FISHERMEN CLAIM THE LARGEMOUTH BASS IS THE SCRAPPIEST FIGHTER POUND FOR POUND THAN ANY OTHER FRESH WATER FISH

THE LENS OF THE FISH'S EYE IS ALMOST A PERFECT SPHERE COMPARED TO MAN'S SOMEWHAT FLATTENED LENS • THE RESULT-FISH ARE NEARSIGHTED – SEE GOOD CLOSEUP - POOR AT A DISTANCE



THE KINGFISH WAS SO NAMED BECAUSE OF ITS GAMENESS WHEN HOOKED, ITS HANDSOME COLOR, GRACEFUL FORM, AND FINE FLAVOR • ALL ATTRIBUTES OF A TRUE "KING" AMONG FISHES

FLORIDA WILDLIFE MAGAZINE • FLORIDA GAME AND FRESH WATER FISH COMMISSION

Florida WILDLIFE

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GENE SMITH *Associate Editor*

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The Cover

Seldom exceeding five pounds, the Redeye Bass are an extra added angling attraction along the cold, swift upper Chipola River—only place they are found in Florida. See page 17.

From A Painting By Wallace Hughes

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Photo By Lovett Williams

A FEATHERED FOREIGNER, traveling practically around the world on his appetite, has set up housekeeping in Florida's cow pastures. He's the cattle egret, *Bubulcus ibis*, a native of Africa. Just how he got from there to here is a bit of a mystery, but he's become practically ubiquitous in Florida during the past two decades and is busily extending his range north and west across the United States.

As his name implies, there's a pretty good chance you'll find the cattle egret hanging around a herd of cows. That may seem like strange company for any self-respecting bird to keep, but this one knows what he's doing—getting an easy meal.

As the cows graze, their hooves flush from hiding prodigious numbers of insects, plus frogs, mice and other small varmints which live in the grass. These tiny creatures comprise the cattle egret's diet, and they're more difficult for the bird to see when they're sitting quietly than when they're disturbed and on the move.

The cattle egret is a strutting dandy in white plumage, standing about two feet tall on vividly yellow legs. He's got a long, spearlike yellow bill. During the spring breeding season both sexes wear buffy plumes on head, breast, and back, and the legs turn a deep ruby color and the bill a bright red with a white tip.

By comparison, the native snowy egret has a generally slimmer appearance, and its legs and thinner bill are black. Also, the snowy's breeding plumage is white. The white ibis has a distinctive curved bill, and the American egret and great white heron are both about twice as large as either the snowy or cattle egret.

relative newcomers to this part of the world, cattle egrets now appear to be

at home on the range

Fossil remains dating from the Pleistocene Epoch indicate that the cattle egret has been following large hoofed mammals around the grasslands of central Africa for tens of thousands of years. In recent times the cattle egret population "exploded" for reasons unknown, and the species is now established in North, Central and South America; in South Africa, Europe and the Asian steppes; and even in Australia.

Since there are no records of cattle egrets escaping from zoos or being harbored by ship captains, it appears that the species reached the Western Hemisphere on its own, thus earning the distinction of being the only Old World bird to gain a successful foothold in the New World in modern times without man's obvious assistance.

The distance across the Atlantic Ocean from the bulge of West Africa to northeastern South America is more than 1,700 miles. For even a strong flier like the cattle egret to have traversed such a distance boggles the imagination. Still, in the absence of any other explanation, most scholars have concluded that this Columbus of the bird world did indeed fly across the Atlantic, assisted perhaps by storms or westerly trade winds.

A specimen shot in British Guiana in 1931 provided the first documentation of the cattle egret's presence in the New World, although naturalists in South America had recorded sightings in their diaries as early as 1877. Over the years the species moved northward through the Caribbean, ultimately reaching the United States, where the first individual was recorded—for shame, Floridians!—in Massachusetts.

A good birder, upon seeing a familiar species, always looks twice to be sure he's seeing what he thinks he's seeing. Sometimes that second look will disclose a rarity, as it did one day in 1948 for William H. Drury, a professional ornithologist, and Alan Morgan, an insurance salesman-bird watcher who later became executive director of the Massachusetts Audubon Society. They spotted a white bird prancing among a herd of heifers near Sudbury, Mass., and rubbed their eyes in disbelief—but it *was* a cattle egret. Armed with a shotgun and a federal collecting permit, they dispatched the bird to a resting place in the Harvard Museum and earned themselves a place in the annals of ornithology.

When word of the find was published, many other birders were ready to kick themselves. One was Richard Borden of Concord, Mass., who got out some old photographs he had taken in Florida at the beginning of World War II. He'd captured on film some birds which looked suspiciously like cattle egrets. Dr. Andrew J. Meyerriecks, an ornithology professor at the University of South Florida in Tampa, says the species might have been in the state, unrecognized, as early as the 1930s.

In 1953, the first cattle egret nest in North America was discovered, at the south end of Lake Okeechobee, near Clewiston. Two years later, over 1,000 pairs were nesting there! The species has since bred in Ontario and the Great Valley of California, and Dr. Meyerriecks predicts a huge increase in its numbers as it becomes fully established in the cattle-producing states of the Great Plains.

When he conducted banding experiments on young cattle egrets in Florida during 1964 and 1965, Dr. Meyerriecks found that most hatchlings stayed in the vicinity of the nest during their first summer of life. Some, however, dispersed immediately and were seen many miles from their hatching place. After migrating back to Florida for their first winter, these roamers may have returned to

(*Continued on next page*)

By GEORGE LEPOSKY

A bird species from the Old World that crossed 1,700 miles of water to settle in the Americas, the cattle egret, left, is apparently the only one to have done so without man's assistance. The first known nesting of these egrets in North America occurred in Florida in 1953. Cows ignore the insect-eating birds, below.

Photo By George Leposky

(*Continued from preceding page*)

new colonies the next year to breed. Based on his experiments, Dr. Meyerriecks believes the cattle egret may expand its range by fanning out from centers of abundance such as Florida.

Some ornithologists have expressed concern that the cattle egret might crowd out our native herons. This doesn't seem to be happening. Dr. William J. Weber, a Leesburg veterinarian who studied a central Florida rookery, found cattle egrets nesting close beside Louisiana herons, snowy egrets and anhingas. Relationships between neighbors of different species were generally amicable, even when their nests were less than a foot apart. Dr. Weber also observed that cattle egrets nest in compact colonies, leaving plenty of breeding room for other species.

There seems to be no real competition for food, either. Although cattle egrets have been observed in the Everglades wading through marshes like other herons in search of fish, frogs and snakes, the cattle egret's dinner table is usually a cow pasture.

Mike Fogarty, a biologist with the Game and Fresh Water Fish Commission, has analyzed the stomach contents of 1,000 cattle egrets and determined that 99.8 per cent of the birds' diet consisted of invertebrates, with grasshoppers, crickets, spiders, flies and beetles predominating. Fogarty found none of the fish on which native herons depend heavily for food.

The cattle egret's "associative feeding behavior" is the key to his success on his diet of tiny invertebrates. Researchers have counted the footsteps taken by foraging cattle egrets, and the number of prey they've captured. These studies show that the cattle egret expends less energy in food-gathering when he's eating "in association" than when dining alone.

"The bird is most commonly found with cows," Dr. Meyerriecks notes, "but he'll associate with anything—horses, tractors, even himself. I've seen groups of cattle egrets leapfrogging over each other as they work their way across a field. Those in front will stir up insects for the ones in back."

The cows don't seem to mind the avian company—and they may even welcome it. Dr. Meyerriecks once observed a bull lying and chewing its cud. Periodically the bull would turn its head toward a nearby cattle egret, flare its nostrils, and allow the bird to poke its bill in and gobble up flies.

In my own observation of cattle egrets, I've noted another quirk in their feeding behavior: animosity between egrets on the left and right sides of a cow. Each bird defends its own side against threats of trespass, an effort made more complex and comical by the movements of the cow—and therefore of the feeding territory.

The cattle egret's feeding habits help to explain why the species has adapted so readily in so many parts of the world. This bird has chosen for itself an ecological niche—cattle-following—which hasn't been occupied in grassland areas outside Africa.

In North America, man has actually created the conditions cattle egrets like. There were no large hoofed mammals in Florida (except deer, which spend most of their time in forests) until settlers brought in cattle and horses.

To the north and west, a large expanse of woodland separated the seacoast from the vast herds of antelope and bison on the Great Plains, but even if cattle egrets had reached that region they would have found a scarcity of water and nesting sites. Reservoirs and planted trees have made the plains a much more desirable heron habitat now. Thus, only within the last century or two has North America become suitable for colonization by cattle egrets.

One can't help wondering, of course, just how the birds knew when green pastures had been prepared for them here. It's possible that the cattle egret's wanderlust—like that of our own species—is an age-old phenomenon. While men were crossing the Bering Straits, and later struggling across the Atlantic to establish precarious colonies in the New World, adventuresome egrets may have been flying out from Africa in search of new homes.

The records of so many explorers—human and avian—have been swallowed up by the oblivion of failure that we shall never know to what extent the cattle egret's history parallels our own. In any case, he has arrived to share Florida with us, and we should welcome his graceful beauty and appreciate his beneficial eating habits. ●

Photo By George Leposky

Cattle egrets nest by the thousands in Florida rookeries, and are spreading northward and westward. They're beneficial; don't compete with native herons for space or food.

Worm Rod

the invention and great popularity of the plastic worm, in its many variations, has led to a whole new line of bass fishing gear.

By CHARLES WATERMAN

THE "WORM ROD" has turned into a pretty versatile gadget. Built primarily for plastic worms and largemouth bass, the sticks are pretty stiff, run around 5½ to 6½ feet in length, and can cover the whole works from panfishing to tarpon wrestling.

I'm speaking of those intended for turning-spool reels, although they can be used with pushbutton equipment too. A few years back they would have been considered too stiff for efficient plugcasting of bass-weight lures. Now that we have the good freespooling reels they will get by even with quarter-ounce weights. They are a little too stiff for the very finest of accuracy under bushes, but they'll get by there if you're willing to practice with them.

When plastic worms first began to send the bass for cover most of us used soft spinning rods, feeling the weight wasn't enough for anything with more backbone. It was very difficult to set a hook in a worm slurper, especially if there was any kind of weedless arrangement involved. Most of us tried to let the bass take the worm home and start digesting it before we tightened up. The later model of worm fisherman hits hard and after a very short dropback in most cases. Since he may have his hook barb concealed in the worm's body and it may have to penetrate the rest of the way through to stick the bass, he needs a rod that won't give too much and a line that won't stretch too much.

After a while the manufacturers began to take note of his requests and you can buy worm rods now, specially built for the job. Before that there was a time when good plugging rods were rather scarce. Everything had gone to spincasting and they were making soft-tipped rods that weren't too happy with a ¾-ounce weight. So the worm rod is a little stiff for ordinary shoreline raking, but I could get along with one and never go back to regular bait casting outfits.

Where plastic worm fishing is concerned, plugging outfits are definitely gaining on spinning. The wormer who goes all the way to 20- or 30-pound line nearly always wants a turning spool. There are places where this heavy stuff is at home, especially in sunken timber found on new impoundments. In open water the diameter of the line shouldn't be that big since it sinks slower, hampers lure action to some extent, and may disturb the fish.

Because of the violent hook setting that goes with plastic worm fishing, most of the rods have plenty of handle, sometimes so much that it's a minor nuisance to those used to small, short grips. Some of them are frankly two-handed outfits and come right in the same class with weakfish popping rods, which are good all-around heavy pluggers. I 'd choose something with a shorter grip than most popping rods have. Remember that some popping rod users put the long handle under the left elbow for right-handed reeling with big surface plugs.

Most bass pluggers prefer offset reel seats and that's very important for fishermen with small hands. Very small reels are a help in bass fishing if the grip is straight, and line capacity seldom has any bearing on bass fishing. If you retrieve with one hand cupped around the reel, a straight handle and a big, bulky reel get complicated. Of course, straight handles give added strength and do away with all of the ills that attack Mickey Mouse connections between handle and stick. (I have been saying bad words about chucks and handles ever since I learned the words at recess.)

Worm fishermen who cast with both hands don't

(*Continued on next page*)

Relatively stiff "worm rods," with baitcasting reels, are fast gaining favor with bass fishermen. Heavier stuff is especially great to have in woody impoundments and weed-congested waters.

(*Continued from preceding page*)

actually wind up like surf fishermen. They generally apply the left hand (for right-handed casters) to the rod butt and simply add a little snap with it. Where pinpoint accuracy is needed I think one hand is better, but it's an individual matter.

Most manufacturers are now getting into the worm rod business. Lew's Speed Sticks are imported by Lew Childre & Sanders, Inc., Foley, Alabama, and are excellent examples of what modern bass fishermen are going for. These are lightweight rods in a variety of actions and employ guides called Fugi Hard Speed Rings made from aluminum oxide. This is tough stuff and offers very little friction. It's also very, very light and they even equip entire fly rods with such guides.

There's a Speed Stick setup that enables the individual fisherman to make up his own rod as he wants it, with a variety of interchangeable components. Not every fisherman is qualified to do anything drastic in rod design, but he probably wouldn't go far wrong. Although I'm talking about worm rods that can be used for a variety of other fishing, the Speed Sticks can be had for lighter and heavier use.

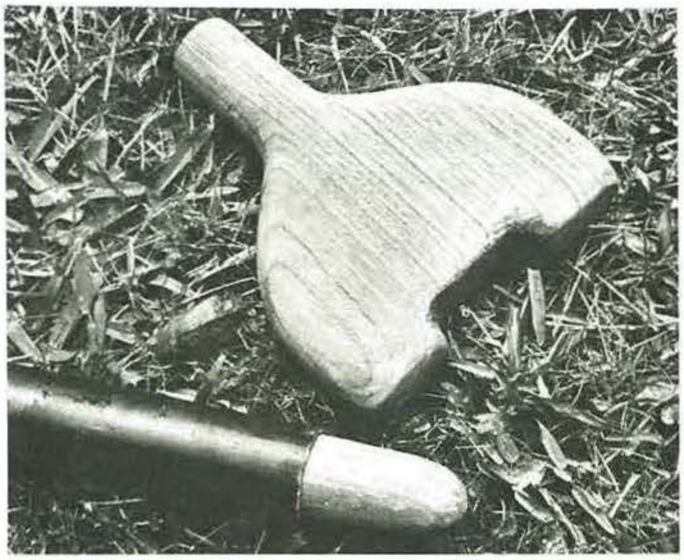
ALONG A COMPLETELY different line in the rod business, there's a place for comment about rod prices. Most of us who occasionally spout off about rod quality get the same questions repeatedly. Are expensive glass rods worth the money? Are bargain glass rods satisfactory?

Of course, there's no flat answer. The more expensive sticks generally have better hardware and are more carefully designed with regard to action. They are less likely to have flaws in the glass. If you're intending to use a rod heavily and expect it to last a long while, you'll probably be wise to put down the extra cash. For occasional use there *are* bargains.

With more expensive rods you may get some sort of warranty, and you're paying the bill for those who take advantage of guarantees frequently. Many rods have been replaced after breakage at no charge to the owner, even when he did it with his feet or his car door. Most established firms have reasonable charges for repair or replacement, although the shipping and insurance costs add up.

I can recall two different fly rods that were repaired for free when they broke because of poor materials. I have had several other rods of one kind or another repaired by the builders at modest cost. You probably won't get much of this kind of service on cheap equipment—but the other side is that replacement won't be expensive anyway.

Glass used in expensive rods is generally of uniform quality. All models of a given catalog description will be nearly the same in action. Glass walls of hollow rods should be about the same thickness all the way around, without weak spots.



Keys flats fishermen need pushpoles, and both ends get regular use. This one's near perfect in design, says author. Sharp end is for staking out; wooden foot propels without much scraping.

The hardware is nearly always good on expensive rods. Mechanical devices for holding on the reel or holding a plugging handle to the stick are likely to be of good materials, but the most expensive rods don't always have the best designs. I still think they play with these contraptions during office parties and take pride in the number of variations they can come up with, but it's a pet grumble of mine and some of them last well. They're getting better, and there was plenty of room for improvement.

In buying an expensive rod you're paying something for advertising and something for the name which has been helped by that advertising. Some glass rods carrying famous names are overpriced. Bamboo rods used for fly fishing and built with great effort and lots of handwork aren't often overpriced as far as construction costs are concerned, although their relative fishing value may not measure up to glass sticks.

It is the beginning fisherman who is most likely to buy inexpensive rods, and he is least likely to be a good judge of them. There are some highly experienced anglers who paw through cheap rods or rod blanks, find the ones they are sure will be satisfactory, and then add the hardware they want. Few of us are that good a judge, but there *are* good, cheap glass rods.

THERE'S CONTROVERSY about plans of the Army Corps of Engineers to charge fees for use of recreation areas. Those opposed say that the Corps and its works are paid for by taxpayers anyway and that no charge is justified, even though a special service of some sort is involved. A typical bone of contention is the boat launching site which comes as part of many Corps-administered impoundments.

This business is made more complicated by the fact that the outdoorsman and the Corps have been on opposite sides of conservation subjects a great deal lately. No proposal of the Corps is likely to get applause from all fishermen and hunters.

The real issue is unexplained so far, and it is the same one that is raised, or should be raised, with every proposed form of taxation. It's the simple matter of what's to be done with the money. If money charged for use of special facilities is used to help those who pay it, it may be justified. If money collected is simply turned into general Corps operations "to buy more dredges," as some put it, then it would be an unfair practice.

Hunters and fishermen have never been backward about asking to be taxed when they thought the money would go for improvement of their sport, but they have long been leery of any kind of "general fund."

This is not for or against special charges for special Corps services. But where *does* the money go?

FIBER GLASS PUSHPOLES are the thing these days. Time was when they were status symbols around the Keys and other boat-pushy places. The first ones I saw were made out of vaulting poles that didn't quite measure up to competition standards. Now you can get a 14-footer made for pushing for something like $18 (unless the price went up while I wasn't looking). That's just a hollow fiber glass tube of the right size for pushing. If you get one with a foot it can be a lot more expensive.

The one I have is about like most of those used on the Keys. It has a foot made of teak and pretty wide. On the other end is a rounded piece of teak used for pushing into soft bottom when you want to stake out.

Until this one, the pushpoles I have used generally had just a triangular piece of wood alongside the shaft to keep it from going in too deeply. Some users think that's the best rig for getting loose if you do get it stuck, but most of the Keys "feet" are wide enough that they won't get stuck anyway. Their shape (see illustration) is pretty good for staying put on a slippery rock.

The "duckbill" pushpoles are fine for some forms of marshy areas—built of metal so that they spread out when pushed against the bottom and then retract into a slim profile when lifted. Many flats fishermen don't want metal on their pushpoles because of the extra grating noise it makes on rocks.

Anyway, the glass one doesn't have splinters and is nice and light.

DON'T HEAR MUCH about salt fish these days, but there's something being done about it by some people up in New Jersey. Since it's sometimes possible to catch large quantities of mackerel, and since mackerel aren't noted for being good keepers, the New Jersey folks have gathered some old family recipes from residents of the Cape May area, have had them mimeographed, and are willing to send them to you.

If you want a free copy of this salty information you can get it from: Mackerel Recipes, c/o Fishing Tournaments, Box 365, Cape May Court House, N.J. 08210.

I guess this shows I'm really getting to be a man of the world. I'd almost forgotten about home-salted fish.

I HAVE NEVER FORMED a very strong opinion about flat monofilament line. Cortland is now making some called Mono-worm for conventional turning-spool reels. It isn't recommended for spinning or spincast equipment. Its purpose is to control stretch that becomes a serious hook-setting problem in worm fishing. It lies flat on the reel spool and casts very well.

Disadvantages? Well, you have to watch the stuff if there are any narrow crevices around your equipment. It can crawl back of the spool ends if they don't fit tightly. The narrow edge is really narrow.

BEING NOTED as a sloppy knot tyer but trying to better myself, I am especially conscious of what I guess you could call "false tightness" of monofilament knots. You get this super knot out of a book and figure it should hold forever, but when you snug it up you stop just as it seems to get tight. Monofilament being what it is, there is often enough stretch left for it to work right on through the knot's convolutions under hard pulling.

This can happen even with such old reliables as the improved clinch knot. The solution, of course, is careful snugging up. The matter of leaving long tag ends to allow for additional tightening under use is debatable. Generally, if it's going to unravel itself it does it anyway. However, many an otherwise good knot has been weakened by someone who tried to be especially neat and clipped an end too closely.

It doesn't take many knots but you should learn a few well.

IMPROVED TACKLE has contributed to the quick landing of outsized game fish, but knowledge of the fish's breathing apparatus has helped more. Ed Miller, of Tallahassee, was commenting the other day on the fact that tuna fishermen now know that the more you can make one run the sooner he'll kill himself. This is the opposite of the old thought that if you could stop him he'd yank himself silly and give up.

The tuna, like many other fish, doesn't do much breathing when he's running. Such facts have made light tackle look good in many instances. With some fish, however, you have to know whether the fish is really running or just moving away and getting plenty of water through his gills. ●

at home with the cottontail

By **GENE SMITH**

Photo By Lovett Williams

Photo By Leonard Lee Rue III

Cottontails seem to breed synchronously—nearly all females are "expecting" at the same time. The young, which number 3 to 5 in an average litter, are born helpless and blind, left. The white beauty mark in forehead, above, is lost before maturity. Rabbit has keen senses of hearing, smell, and sight—the large eyes at sides of head insure rabbits and hares sight in all directions.

Photo By Leonard Lee Rue III

IF EVER THERE WAS A WILD ANIMAL designed for survival, the Eastern Cottontail Rabbit is one. Yet it doesn't have armor like the armadillo, or tough hide like the alligator, or rock-hard scales like the ancient-ordered garfish. Instead, the rabbit is soft, vulnerable, and heavily preyed upon.

What then is the cottontail's secret of survival?

Mass production, pure and simple. Everybody knows they breed like . . . well, like rabbits, but not everybody knows they probably die about as young as any wildlife species. Rabbits suffer an 85% population turnover annually; that is, only 15 of every 100 bunnies born can expect to survive beyond their first birth-day. Those that make it, however, are capable of repopulating the fields and woods of both town and country—and in some years, in addition to recouping losses, there's a marked gain over the rabbit crop of the previous season. It seems to be cyclic.

Cottontails in Florida produce from three to five litters annually, between February and July, with the peak of production coming in April and May. A few late litters—possibly the sixth go-round for some females—are produced as late as September.

Three to five young per litter is the average, but up to 12 have been recorded in one batch, though not in Florida.

The gestation period for cottontails is 28 days, and since they are most promiscuous it is no wonder they've never been in danger of extinction. Researchers say many female rabbits have been bred again within 24 hours after giving birth.

Photo By Leonard Lee Rue III

Like Br'er Rabbit of the Uncle Remus tale, real cottontails are "born and raised in a briar patch," or similar protective cover, from which they seldom venture too far. At night they feed and play; by day, they are usually sleeping in a bed, or form—unless exposed by an intruder. Suburban gardeners often have to fence out hungry cottontails who are known for strict vegetarian diets!

Photo By Karl Maslowski

Members of the order Lagomorph, the rabbits, hares and pikas, are strictly vegetarians. They munch leaves, buds, bark and berries; they also lap dew from plants, although they drink water if it is available.

Now pikas are small tail-less mammals of the mountains; some call them rock rabbits; some call them conies. But do you know the difference between rabbits and hares? Well, hares have hairy young whose eyes are open at birth and who are able to fend for themselves shortly thereafter; baby rabbits are bare and blind at birth and must be cared for—concealed in a bed and nursed for a couple of weeks. Hares have long hind legs for leaping; rabbits have short, muscular hind legs for sprinting. Hares have big, floppy ears; rabbits' ears are shorter, and in the case of the marsh rabbit, very short. And when is a rabbit not a rabbit? When it's a jackrabbit (of the West) or a snowshoe rabbit (of the North). Both are hares. ●

Special Note—There's still no closed season on rabbits in Florida, but a valid hunting license is required, and, beginning July 1, 1973, the daily bag limit is 10 rabbits and the possession limit is 20, whether cottontails and/or marsh rabbits.

attracting birdlife to a feeder
is easy, entertaining, educational,
and enjoyable all year long

in your own back yard

By CHARLES DICKEY

FOR A LONG TIME, I regret to say, I thought bird watchers were typically little old spinsters in tennis shoes who slipped around spying on birds, occasionally using their binoculars for a quick look in someone's window.

It was difficult for me to understand why they would get up before daylight to be on station to catch the first bird movements. If they had to get up so early, I thought, they should do something sensible like sit in a duck blind and watch decoys all day.

What happened when they watched birds? Did the birds watch back? Did the birds resent it or ignore the peepers? Somehow, it always seemed a little sneaky to me for elderly maiden aunts to be up and about spying out the personal habits of birds, even their mating activities. It was kind of like opening other people's mail.

Movies and television frequently portray bird watchers as surreptitious, gray-haired men, a little on the batty side but thoroughly lovable, who know a lot of hidden facts about the murder but didn't commit it.

Well, I joined their ranks last fall! My in-laws, Mr. and Mrs. Glade Perrin, sent me a ferris wheel bird feeder from Massachusetts. I'm hardly an expert after a few months of observing birds, but I have a lot of company. There are about 7.5 million birders in the United States, according to a recent survey by the U.S. Department of the Interior. About 4.8 million people enjoy wildlife and bird photography. More than 30 million Americans participate in nature walking, and presumably a large percentage of these enjoy seeing birds in their native habitat.

We decided to put the ferris wheel feeder 10 feet from our breakfast window panel, convenient for observation but not so close as to generally frighten the birds. The feeder has four arms, each of which holds a tiny plastic cup for feed. The arms are delicately balanced so that when even the smallest bird lands, it gets a swinging ride.

It was obvious the squirrels would quickly start using the feeder, so we hung another with 20 feet of chain from an overhanging live oak limb. This one remained squirrelproof for five months until Fred, the most daring of the six squirrels working our back yard, got hungry enough for sunflower seeds to jump from our roof to the feeder, the equivalent of my jumping the length of a basketball court.

The two bird feeders quickly replaced television during the breakfast hour and for many hours in the afternoons and weekends. Our outdoor screen is in living color, ranging from the vivid scarlet of male cardinals, to the sky shades of blue jays, to the iridescent purples and blacks of the Florida grackle. There's a new show every day, part of a continuing series, especially when one picks up a few pointers on what to look for.

Let me hasten to say that our family observes for fun, with no notebooks yet, and none intend to become professional ornithologists. However, we are advanced past the observations of most poets, who, unfortunately, see little more than bright colors and try to give birds human characteristics.

Each little bit of knowledge gained, either from direct observation or reading, makes the watching more enjoyable. I suspect that deep down in every human there is a desire to discover something and announce it to the world. It's too late for me to stand on the peaks of the Isthmus of Darien and discover the Pacific Ocean with Vasco Balboa, but I felt akin to him the day I discovered peanut butter spread on top of a feeder was a sure-fire way to attract a red-bellied woodpecker. A small victory you say? Well, you just wait until you make your first discovery.

Sunflower seeds are like magnets to cardinals, finches, and mockingbirds, but they are expensive if squirrels have access. Mixed feed with a variety of small seeds, available from most grocery or pet stores, attracts smaller birds such as sparrows, chickadees, and warblers. During the fall and winter, when migratory birds came to north Florida, we kept the "squirrelproof" feeder filled with sunflower seeds and the ferris wheel loaded with mixed seeds. The hungry squirrels chewed the holders, spilled the feed, and scraped the paint off the feeder. We didn't care, as they are as much fun to watch as the birds.

We were fortunate that our feeders were not far from escape cover, especially the sprangly branches of the overhanging live oak. Although our home is in a Tallahassee suburb, several times we saw Cooper's hawks hunting beneath the canopy of trees. There are numerous cats, dogs, and people; generally enough traffic to keep the birds jittery, and I don't believe we would have had as many bird residents and visitors if the feeder had been in the open, far removed from escape cover.

When one opens a feeding station, he is soon forced to buy colored-picture books on birds. Identification of the species must be made. My son and daughter have lively curiosities and were always asking, "What's that new bird on the feeder?"

They quickly grew tired of my replies, "Oh, that's a gray bird. That one over there is a small bird. The one walking on the grass is a big bird."

My wife, Bunty, bought one book after another as the migratory birds arrived. Each succeeding book had more color plates. The birds are not always cooperative. In some species, the male and female look very much alike, as with blue jays. In other species, such as cardinals, the male and female have different plumage. A juvenile male does not have the final definite colors of the adult male. No matter how good the bird artist, nor how many colored pictures he shows of warblers, there is seldom a color plate which is identical to the warbler you are watching and hope to identify.

Whenever a new arrival would start freeloading on us, we'd dive for the books. It is amazing how much some of the American birds resemble those in distant lands. Once I proudly announced to the family the name of a new visitor from a picture I had rather hastily thumbed to. My wife, who took time to read the descriptive print, pointed out that I had made a discovery which would shake the ornithological world. The bird is found only in the Himalaya Mountains of India and Tibet.

It was obvious that some species preferred to feed on the ground and would use the feeders only when there was no feed on the ground. Mourning doves never attempted to use one of the feeders. When they came in, if there was scattered food they stayed and fed; otherwise, they left. Blue jays seldom went to a feeder, and always preferred bread crumbs to sunflower or other seeds. A half slice of leftover bread is not too much for a jay to try and fly off with.

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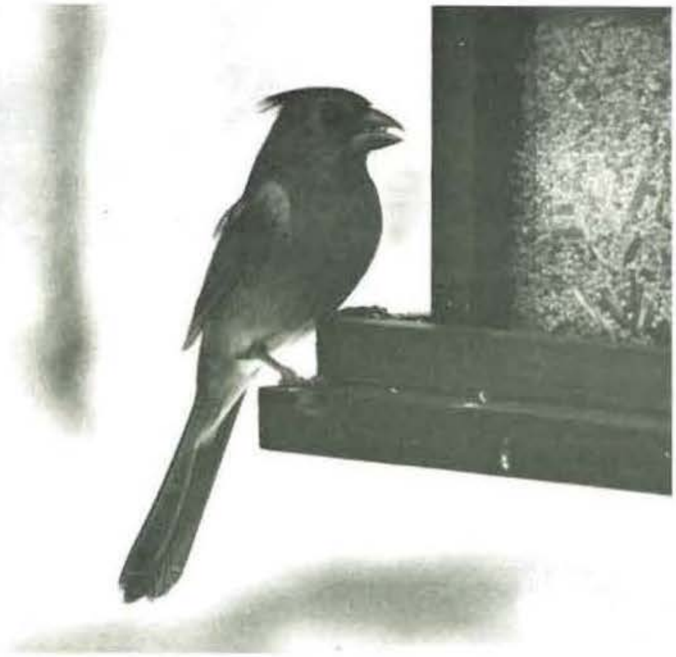
Photos By Steve Theg

Like kids on a ferris wheel, these birds enjoy the ride as they dine at revolving restaurant. Chickadee, at left, and chipping sparrow yield to incoming traffic of larger birds such as grackle, right, and mockingbirds. The author keeps them all happy with several feeders which are well spaced.



Many familiar bird species, such as the cardinal, left, and the red-bellied woodpecker, above, are permanent residents; lovely winter visitors like the purple finch, at right, and many others make breakfast time bird watching more exciting than color TV! Acrobatic squirrel, jousting with a windmill feeder, below, puts on special show the Dickey clan enjoys.

(Continued from preceding page)

There is an understandable tendency for new observers to become possessive and to jump to conclusions. For instance, very rarely did we ever see more than two doves in the yard at one time. They quickly became "our" doves and all of us assumed the same pair came back repeatedly. Ellie, our 16-year-old, shook us out of this one morning by asking, "How do you know it's the same pair?"

Bunty, Steve and I looked at each other as the light dawned. We did not know if it was the same pair and could not possibly have known. We simply assumed it and wanted to believe it. If we were going to be birders, we had to learn to be objective, gather data, and base any conclusions on facts.

When a beginner watches 15 or 20 species of birds using a limited amount of feeder space, he quickly realizes that birds are not all sweetness and beauty. One finch doesn't hesitate to peck another finch off the feeder. One species doesn't balk about running off another species; that is, a mockingbird will bluff a cardinal off the feeder nearly every time.

There are two important aspects of wildlife behavior here, both discovered and clarified by outstanding bird watchers of great scientific skill. Within the individuals of a single species, each bird instinctively requires individual space, or territory. It's as though it has an invisible barrier around it. If another bird lands 12 inches away, the first bird may act as though he does not notice. If they suddenly find themselves within six inches of one another, they get jumpy. At a certain distance, say five inches, they will not tolerate one another. There will be brief chatter, bluffing, perhaps pecking, and one bird has to go.

Whether chickadees, sparrows, or warblers, we never saw birds willing to share the small cups on the ferris wheel feeder with another bird, either of the same species or a different one. There apparently was not enough individual space for two or more birds. No matter how many birds were chattering in the trees above, waiting to go through the buffet, it was rare to see more than six birds on the feeder at one time, counting the arms, base and feed cups. There is an individual distance for each species, whether intruded on by one of his brothers or another species.

This principle is easily observed if you watch a flock of ducks. Domestic mallards may swim contentedly for an hour, dabbling and loafing. If a certain distance is kept between all individuals, there is complete harmony. But let one mallard get too close to another, violating individual space needs, and pecking starts immediately. The violator of the territory, or intruder, usually is the one which backs down.

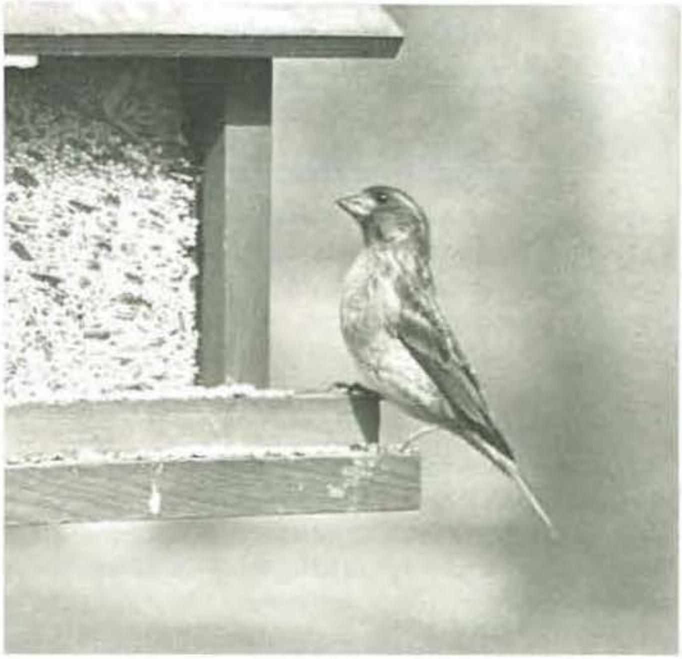
Dominance among the different species in the same area, such as a back yard with a feeder, is quickly observed. It's usually the larger species which dominate the smaller, as would be expected. A finch will run off a chickadee; a cardinal will rout the finch; a jay will flush the cardinal; a mockingbird will run off the jay; and a purple grackle will move any of them off the spot he wants. Yet, all of these species will tolerate one another on the ground where there is adequate room. They will feed happily until one bird violates that invisible boundary of tolerance or territory.

There is a natural tendency for humans to try and apply human morals and conduct to wildlife. It is hardly fair and certainly not realistic. For instance, the blue jay is loud, rambunctious and has the reputation of being an egg stealer. These are characteristics we do not admire in humans, so some people don't like jays. The bird should not be condemned. Being raucous is his natural way of doing business as dictated by thousands of years of genetic evolution. We can best appreciate wildlife, and learn more about it, only when we accept any species as nature has made it. The jay, as well as other unlovable species, is as interesting and necessary as the milder birds, such as titmice.

During the winter, we frequently saw two or three red-bellied woodpeckers in the live oak tree, but we never saw them land on a feeder. About this time, Gordon Spratt, assistant chief of Game Management for the Florida Game and Fresh Water Fish Commission, told me that peanut butter was an instant attraction for many kinds of wild birds.

The next morning, I coated the top of the large feeder with chunky peanut butter. In less than an hour, two redbellies were taking turns landing on the feeder and getting their throats clogged. As long as they were feeding, they would let no other bird land on the feeder. Up to that time, before we had any Florida grackles, mockingbirds had ruled the back yard. But no more! The aggressive mockingbird would not argue with the woodpeckers. It is easy to understand why when one looks at their long beaks and realizes the muscle force behind the head and neck, which can drive the beak deep into wood. No bird wants to get drilled with that bit!

Photos By Steve Theg



The following morning, the peanut butter was gone. While I was having a last cup of coffee, a redbelly lit on the feeder and began to shriek its raspy call. I got up, found the peanut butter jar and a knife, and went outside. The woodpecker leisurely flew up to a nearby limb, as though patiently waiting for me. (Before the peanut butter era, we had never been able to get close to them.) I spread the gunk and went back in the house. By the time I had my coffee cup again, the redbelly was pecking at the peanut butter.

I thought the whole sequence through and said, "Whoa! I'm about to give that woodpecker credit for ordering his breakfast, or for being able to reason. Birds aren't supposed to have that kind of intelligence."

There had to be an explanation other than the woodpecker deciding he was hungry and could freeload if he shrieked at me. Perhaps some of the neighbors had been feeding him. Maybe when a red-bellied woodpecker flies to a spot where he has found food before, and finds none, he gets angry and shrieks. But how to explain my opinion that he had "tamed down" since I put the peanut butter out?

I don't have the answer. My one definite conclusion is that the woodpeckers cost us a lot of peanut butter. I also found out by feeding breakfast scraps that woodpeckers like melted cheese on toast.

When small flocks of purple grackles began using our back yard, they were spooky and would not come to the feeders. Gradually, they moved in

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closer as I baited them with bread scraps. They prefer to feed on the ground, but as they became bolder they soon were landing on the hanging feeder.

Up until this time, the red-bellied woodpeckers were the dominant species around the feeders. One morning a redbelly was munching peanut butter when a grackle came swinging in and landed. They looked at each other a few seconds and then the woodpecker gave way, darting low and then up into the oak tree. Hail to the new king! The grackle was now the dominant species of the dining area.

If you decide to set up a feeding station, you'll want to notice the time birds arrive in the mornings, through the middle of the day, and the afternoon feeding times for various species. Most species follow a pattern, although it may vary because of weather. I suppose it could also change because birds are freeloading at someone else's feeder.

The study of wildlife behavior is a fairly new science. Even newer is the study of human behavior, often using principles discovered in lower animal life. It's an exciting new field as man tries to learn more about himself, what part instinct and evolution play on his behavior, and what part environment. For the past 50 to 60 years, the emphasis has been on environment, almost to the exclusion of innate characteristics of humans. Many of the big breakthroughs on instinctual behavior have come from bird watchers, some of the expert amateurs contributing as much as professionally trained scientists.

Five years ago, Robert Ardrey threw a blockbuster at the world with a summary of the results of the best studies on animal behavior regarding territory. The playwright's book TERRITORIAL IMPERATIVE emphasizes that nearly every species of animal life has an instinctual compulsion to hold territory.

Although Charles Darwin danced around the concept of territory, it took a dedicated amateur British bird watcher, H. Eliot Howard, to recognize and clarify the principle that a bird must have a certain amount of territory during the mating season. Territory can be a limiting factor in the number of successful matings, which would therefore affect the bird population.

It is dangerous and very unscientific for me to transfer to humans my limited observations and cursory readings on bird behavior, but it is fun.

Can man learn much about himself from studying lower animals? Each human has his own need for individual space, although he may not realize it. You don't believe it? Try this for size: Just notice the next time a speaker keeps pushing his face closer and closer to yours, and how you back up and resent his intrusion. It isn't just his garlic breath that makes you uncomfortable or angry; he's violating your individual space.

Photo By Wallace Hughes

Mr. Jay is not the dominant bird on the block, in spite of his raucous nature; mockingbirds, woodpeckers, and grackles all run him away. Bluejays prefer bread to sunflower seed.

It has been proven that birds have an instinctual need for their own territory during the mating season. They stake it out and defend it. Does man have the same need to stake out territory, even if it is a subconscious need? The next time you go to a hunting or fishing lodge with several companions, notice this one factor: At the first meal in the dining room together, wherever a person sits the first time, that's where he will sit at all following meals. He has staked out territory, even to the point that he may get miffed if someone sits in *his* chair!

Howard, and behavioral scientists after him, showed that a male bird stakes a territory and the female is attracted to the territory, not to the individual male. Of course, there is variance with species, but in some species for sure the female cares less who the owner is; she's willing to mate with any owner as long as she gets the territory she is attracted to. Does this apply to man? I don't know, but did you ever see a millionaire who lacked girl friends?

If you wish to become a bird watcher, it'll add to your pleasure if you learn to identify species quickly, recognize the sexes, watch for dominance—the pecking order, notice how a species handles individual space, and note feeding times. When you transfer bird behavior to humans, do it for fun and not for any absolute conclusions. Each form of life has its own peculiarities; eternal principles which apply to several species are hard to come by.

Bird watching is about the most inexpensive hobby you can take up, but one of the most rewarding. It will open up a whole new world right in your own back yard. ●

Redeye Bass

By GENE SMITH

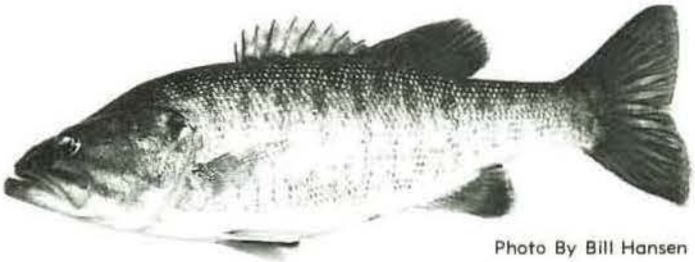

Photo By Bill Hansen

OF THE MANY fresh water game fishes of Florida, the most unique has to be the redeye bass, *Micropterus coosae,* a variety of black bass that, in our state, has been found just in the Chipola River, in Jackson County.

The redeye was somewhat of a mystery fish for many years. Sport fishermen had been battling them for generations, along with plenty of largemouths, before fishery scientists became genuinely interested and collected a sufficient number of specimens to confirm the species identification, in 1956-57. Locals knew these scrappers as "shoal bass" and "Chipola bass," and still call them that most of the time.

Redeyes appear to reach a top weight in Florida of only four or five pounds, but who knows? The largest one collected by members of a Game and Fish Commission survey team out looking for them was a 4½-pounder, but in interviewing area fishermen they were told that much larger ones had been landed from the Chipola, and the biologists had no reason to doubt it. Redeyes do grow larger elsewhere in their limited distribution.

McClane's STANDARD FISHING ENCYCLOPEDIA says the redeye bass is found in the upper tributary streams of the Alabama and Chattahoochee rivers in Alabama (one of which is the Coosa River, from which the Latinized name for the species was taken when this fish was first described in scientific literature in 1940); in the Savannah and Flint river drainages in Georgia; in the Conasauga River system in southeastern Tennessee; and in the Chipola in Florida.

This reference gives the weights of redeye bass as "3½-4½ pounds," with lengths "up to 19 inches," except that "The Flint River subspecies is known to reach 6 pounds."

Publications of the Georgia Game and Fish Commission indicate that Flint River redeyes may even reach eight pounds, and that anglers there refer to them as "Flint River smallmouths," a misnomer that can lead to confusion in both fishing and writing circles.

Like Florida's Suwannee bass, *M. notius,* the redeye *is* a species of bass having a small mouth, but it *isn't* a smallmouth bass, which is an entirely different fish, native to higher elevations and cooler water than south Georgia or Florida afford. But the redeye does resemble the smallmouth bass, *M. dolomieui,* both in physical appearance and fighting stamina.

McClane's book cites another similarity of the redeye to the smallmouth: spawning habits. It says, "In the northern part of their range they spawn in late May, June, or early July. Three-year-old fish as small as 4.7 inches have been found to be mature. One 5.7-inch female contained 2,084 eggs." The writer also says, "In Tennessee the growth rate of the redeye bass is slow when compared to other warmwater fishes. Growth is fast the first year, but decreases as the fish becomes older. On the average a 10-year-old fish grows about 1 inch a year. In Alabama the average size is about 12 ounces, but fish of 2 pounds have been caught."

No life history studies have been conducted on redeyes in Florida, but a lot of "tackle techniques" have been investigated.

Fishing for the redeye—or shoal, or Chipola, or Coosa—bass is an angler's dream regardless of what you call him. In the clear, rocky, fast-moving waters of the upper river, just below Marianna, most fishermen prefer to drift quietly along, casting as they go.

Redeyes feed on floating insects a good bit, so they're tops on fly tackle. But they also take spinner baits and small spoons. They'll hit natural baits, including worms and live shiners, and have a reputation for jumping, bucking, and shaking from the time they're hooked until they get off or are safely in the net, whichever comes first.

"They are the brook trout of the warmwater species," wrote one biologist, citing similarities in size, habitat preference, feeding habits, desirability, and the gameness of these two fine native fishes.

Coloration may vary on different specimens of redeye bass, depending on the age of the fish in hand, the time of year, the lighting under which it is viewed, and whether it is dead or alive. Certainly its faint patterning begins to change shortly after it is removed from the water. The adult redeye is quite uniformly greenish above, sometimes with light vertical bars, gradually shading to lighter green on the lower sides and whitish on the belly. When young, the barring is prominent and the fins are brick-red with light margins, but these markings tend to become obscure with age.

Three identifying characteristics remain with *coosae,* however, and a bass from the Chipola that has all three is surely the real thing: (1) a red eye, (2) a *shallow* notch between the spiny and soft parts of the dorsal fin, and (3) a jaw that *does not* extend beyond the eye when the mouth is closed. Catch one like that in any other west Florida river and you might make fishing history all over again, for as of today the only known Florida home of the redeye bass remains the Chipola. ●

for a grab bag of sport fishing fun, head for

Banana Patch Bonanza

By **MAX HUNN**

IT WAS BARELY AN HOUR before sundown when we finished anchoring our houseboat near the mouth of Avocado Creek at the head of Tarpon Bay, deep in the back country of the Everglades National Park.

"Want to run up to the Banana Patch and check things out?" I queried Fred Mulholland. "Our wives can relax here and get supper ready while we scout. We should catch some bass, too."

He looked at me dubiously. I knew why. This was his first trip into the park back country, and undoubtedly he questioned some of my angling claims—fabulous black bass fishing with snook, tarpon, and reds tossed in for good measure. After all, fishermen have been known to bend the truth now and then.

Also, he was no neophyte angler. He, too, could tell there was little fishing light left. Probably the idea of quickly catching bass sounded just a little too much like a chamber of commerce spiel, although neither of us worked for any chamber.

Fred reluctantly agreed. He didn't bother to put any fishing tackle in the 15-foot Ouachita bass boat Alden Johnson had loaned me for the houseboat fishing safari. Alden, a veteran south Miami Evinrude dealer, was intrigued with the idea of using a stick-steering bass boat—designed for maneuvering in tight quarters on inland waters—in the park back country. This one was powered by a 25 h.p. Evinrude, and could go like a scatback with two people, yet was not a big bomb, a gas hog. It was one of two fishing boats we'd towed behind the houseboat all the way from Flamingo. Fast as the boat was, Fred obviously didn't think there was time to catch any fish. Maybe he didn't believe there were any.

What Fred didn't know was that the Banana Patch—there are wild bananas growing at the junction of Rookery Branch, Avocado Creek and North Prong, remnants of an ill-advised homesteading attempt in this part of the mangrove wilderness—is a fabulous fishing hole at times, depending upon the fresh water supply inland. Given a steady water table for a year or so, the largemouth black bass multiply like fleas on a hound dog. Too, the frisky bass don't see too many plugs. Because the Banana

Where fresh water meets the briny, there's a delightful zone from which both salt and fresh water fish can be caught. Largemouth and snook, far left, were part of the nice strings netted on houseboating trip out of Flamingo on one particularly good weekend!

Photos By Kit and Max Hunn

Patch is a long run—about two hours one way with big motors from Flamingo—and because 99 per cent of the Flamingo anglers seek saltwater species, not too many people fish the area.

The fish are there, despite their lack of publicity, a virtually virgin fishing territory, and one of my favorite haunts. Ever since first sampling this fantastic fishing back in 1960, it's been a favorite hole, but infrequently visited because of the distance. However, with the availability of rental houseboats at Flamingo, there's no problem.

The houseboat concessionaire furnishes everything except food, drinks and personal items. Your floating fishing base can sleep six, and it's a mighty swank one, with wood grain paneling, picture windows, and even carpeting.

A two-burner alcohol stove is located 'midships, alongside a small sink. There's plenty of storage space, and you can carry 125 gallons of fresh water—not enough to make showers possible (there is a shower stall), but ample for ordinary purposes. You don't set speed records, but you can get there safely. It takes about half a day to reach our favorite anchorage from Flamingo.

The floating fishing base has made it possible for us to visit the Banana Patch regularly and have ample time for fishing. Now we get a houseboat, load up with provisions, and set up shop at the mouth of Avocado Creek. It's only a few minutes run to the Banana Patch from this anchorage. It's about as close to a fishing paradise as we ever expect to get.

We've made the trip several times, so actually I was on safe ground predicting fishing success, inasmuch as the Glades water table had been fairly constant. The Banana Patch area is one fishing section where it's hard to fail, if there's any water. Located where the fresh water becomes brackish, it's a melting pot of fish—fresh water bass (we never tried for bream, but I wouldn't be surprised if they were there too) mingling with snook, tarpon, redfish, jack crevalle, speckled sea trout, ladyfish, and who knows what else. We've caught all these at various times and on lures meant for other fish. It can be the most confusing angling you ever hope to encounter. When a 4-pound snook socks a Johnson spoon with a plastic worm trailer, you certainly have a confused situation. A snook did this to me once, while I was merely retrieving a line snarl. He almost took the rod out of my hands.

One trip with Bob Hadley and Gene Lechler, we boated 29 bass, seven snook, a lady fish, a jack crevalle, and a mangrove snapper in two short fishing sessions. It was odd. You could almost call your fish—fresh or saltwater—by the type of retrieve. A slow, tantalizing retrieve brought forth a black bass, while a speedy one intrigued a saltwater brawler.

With this in the back of my mind, we began our Banana Patch checkout sortie. I was confident of some sort of action. We worked our way through the mangroves at the mouth of Avocado, then took off full bore to the little pond halfway up the creek. There was barely a trail through the grass-covered pond, but we made it with minimal pushing. Then it was clear sailing, down a narrow trail, hemmed by dense grass, to the Banana Patch. The sun was just about to the tree line when I turned the boat around to head back. But I just had to make a few casts, while Fred, in the rear seat, played tourist.

Putting on a topwater balsa plug with a lip, I flipped it, with my open-face spinner loaded with 8-pound test line, near the grass and twitched it.

(Continued on next page)

Rookery Branch bass fishing was fantastic for Kit and Max Hunn. They tied into over 50 bigmouths in a day—released most to let 'em grow! The largest was feisty four pounds. One comes on board for Kit, above, her tenth for morning!

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The second twitch brought action. It was the savage little swirl of a hungry fish, and soon I was releasing a 1-pound black bass. He wasn't any record, but he made my predictions look good. Releasing him, I flipped the little plug out again. Bang! I tied into his twin. This one, too, went back. My third cast brought contact with a bigger largemouth, and Fred was fidgeting now for lack of a rod. Three for three is excellent fishing. I'd like to have tried for more, but time was against us. With barely 15 minutes until sundown, we had to leave, knowing even then we'd be running in half light, and the dark mangroves provide poor visibility.

Leading the way the next morning in the speedy Ouachita bass boat, I soon outran Fred, who was using a 16-foot fiber glass skiff with a 9.8 h.p. motor. While waiting for him just above the pond in Avocado Creek, I decided to test the situation. This was far downstream from our normal bass fishing. We'd never caught bass this near Tarpon Bay. But the bass were there, and they were anxious. Two casts with a balsa shallow running plug, and two bass were in the boat.

Resuming the lead, Kit and I were first into the "hot" bass section. We began fishing a quarter of an hour ahead of Fred and Ruth, who stopped to do some sightseeing en route to the Rookery Branch area. Although the bass had been chomping on the balsa floater, I decided to experiment. Rigging my second rod, loaded with 10-pound test line, with a Johnson spoon and a plastic worm trailer, I flipped it near the grass line and let it sink in what appeared to be a deep hole. I twitched it once, let it sink back, and twitched it again. Blooey! It was a hard strike. I knew immediately it was not small fry.

Momentarily, he felt like snook. Was this a repeat performance? This was the same area where I'd nailed a 4-pound snook on a trip the year before. My foe dug for the safety of the grass, and I applied maximum pressure. I wanted no part of dredging grass to land him. The pressure of the rod and drag checked him, and gradually I regained line. Near the boat he spooked, taking to the air in the traditional tail-dancing, head-shaking routine of an angry largemouth. He landed with a whoomp! The line held, though, and now he was exhausted. Kit netted him for me. He was the biggest we've caught to date at the Banana Patch—four pounds of solid fight.

Later in the day, Kit successfully whipped one almost as big. Hers tipped the scales at a fraction over three pounds. It was obvious that in the years between our visits, the Banana Patch bass had put on weight. Another few years of stable water and there may be some real lunkers waiting, or they may be there now, just too smart to open their mouths foolishly. Who knows?

The fishing was fantastic. By lunch time, Kit had fought 10 largemouth bass and an undersize snook—bigger than most of the largemouths we were encountering. I'd tangled with 13 bass, including the 4-pounder. We certainly couldn't complain for lack of action.

Fred and Ruth had gone past the Banana Patch junction and down the North Prong. When we joined them for lunch, they displayed a nice redfish and a keeper snook. They'd released several small largemouths. Yes, fishing was excellent.

Action in the afternoon—when the bass fishing should have slowed—continued at a fantastic pace. It didn't matter where we flipped out lures, we stirred up a roll or connected. Kit and I tangled with 31 bass in the afternoon hours, releasing most of them. The fun was getting them to hit the little piece of balsa equipped with hooks. And hit they did!

Since we were returning home the next day and still had plenty of ice, Fred and I cleaned four limits of black bass that night, plus three keeper snook and a redfish. He and Ruth had plenty of fish dinners for the following weeks.

With success like that, do you wonder that we rate the Banana Patch as a super fishing hole? It can't be classed other than fabulous. Now to plan another trip to this bass bonanza. We'll be taking off any day now, and it can't be too soon! ●

"Operation Cleansweep"

To get across to the public that forest land, whether public or private, isn't the place to park garbage, abandoned refrigerators, and cars, the Florida Division of Forestry has started a program called "Operation Cleansweep."

The Division is stepping up enforcement of a Florida state law that makes it an offense to be caught littering public highways, roads *or lands*.

"Strict enforcement isn't really going to solve the problem, though, unless the local governments can come up with some alternate means for the disposal of trash in rural areas," said John M. Bethea, director of the Division, which has custody of the state's 306,000 acres of state forests.

"Shady roads in quiet, out-of-the-way woods, have long been used as private garbage dumps by unthinking people who see no harm in trucking their week's garbage to such spots, and probably think they are doing someone a favor," Bethea commented.

On private lands, the dumping creates not only eyesores, but also fire and rodent problems. It also contaminates water in lakes and creeks. Foresters feel concern over the situation, largely because private woods are Florida's main source of wood products and year-round recreation.

On state forest land (and also the national forests), the public is even freer in trashpiling its garbage, as can be seen at the 185,000 acre Blackwater River State Forest near Milton, where one entire stretch is covered with abandoned cars.

"It is an odd way to treat a forest that earns almost one million dollars for the state each year in timber receipts and provides a recreational haven for thousands of Florida's residents and visitors each year," Bethea said.

Also severe, but a different problem, is the "littertype" garbage which accumulates from picnickers and campers who use the forests. They are usually encouraged to litter by the little mounds of garbage they find all along in the forest.

Woods dumping causes increasing problems in state forests. An example is old car cemetery in Blackwater Forest near Milton, surveyed here by Philip Krul. Trash, below, is major eyesore.

The fact that "garbage breeds garbage" and "litter breeds litter" is of main concern to the Division.

"According to a recent study, the solid waste thrown away each day by each person in Florida amounts to 5½ pounds, and can be expected to increase to 12 pounds per day by 1990," Bethea said.

What many people do not realize is that when garbage is thrown in an uncovered, untreated area, it doesn't end there—it filters into nearby streams, creating health hazards and underground water pollution that will eventually seep into ponds and lakes.

Members of the Division say their warnings and letters to persons whose trash is found in the forests fall on deaf ears. (The offenders are identified by envelopes, mailing labels, and motor serial numbers or license plates.) The Division says it will prosecute those who are caught emptying trash in the forests in the future.

Withlacoochee State Forest, near Brooksville, is the state's second largest forest, where everything from tree prunings to beer cans are periodically collected by a staff of two men using a 2-ton pickup truck. The litter is discarded at one of four landfills operated by various counties in the forest.

The estimated annual cost of Withlacoochee's annual garbage pickup is over $15,000, including the cost of replacing barrels and signs which are left to remind the public not to litter.

"We once sent an envelope with some of the garbage back to the dumper," Withlacoochee supervisor Jeff Lewis said. "He was lucky; in some states, they send it COD."

"Operation Cleansweep" is a program to educate the public to the "whole gross picture" and to open the door for good ideas to reduce the problem. ●

Photo By Art Runnels

occasional enjoyment now—with happy thoughts of "someday"

Retire — *and Fish*

Reprinted—By Request—From
June 1965 Issue

WE'VE BORROWED a phrase from the underworld. "He's doing hard time" we say when a retired Florida resident is stewing about how to spend his abundance of leisure. More specifically, we refer to one who quit work to fish and can't seem to get started at it.

The "hard time" term is a private phrase of my wife and me but the condition that it refers to is common.

You want to quit and fish? Do some thinking first.

I make my living, such as it is, writing about fishing and hunting. What I write is mostly the result of general experiences or "how to" articles as opposed to the relation of a specific hunting or fishing adventure.

Now I've decided that in order to write authentically about fishing, I should spend at least 150 days out of the year actually engaged in it. I figure the hunting part takes 50 days of participation. This is a happy decision because I love to fish and hunt or I wouldn't be in this business. Business?

So what's my problem?

If you figure it's forcing myself to lay down my rod and grab my typewriter, you're wrong. My problem is forcing myself to get out and do those 200 days of research.

"What a jerk!" you say. "This guy doesn't really like to fish. If he did, he'd hate the thought of pounding the typewriter."

But you're wrong. I love to fish. In the days of my youth, I've missed sleep, meals and a lot of other comforts just to fish. Until I went into the business, I spent every possible moment at it, but now, with the rest of a lifetime of fishing and hunting stretching before me, I get lazy about it.

It's easy to stay home today because it looks like rain or it's too hot or too cold or the lake will be crowded or the fishing reports are bad anyway. Getting a boat ready to go, assembling tackle or packing a lunch is a nuisance now; not unpleasant once in a while but a nuisance when it comes 200 days out of a year.

The joyful experiences of travel have palled a little. A fishing invitation to Canada or South America would have enraptured me a few years back. Now I study it thoughtfully and wonder if the fishing is really as good as the man says. Packing my gear 20 or 30 times a year is no longer the picnic it used to be.

Sure I want to fish in South America and Canada, but I weigh the pleasure against the trouble and time spent getting there.

Part of that is a case of getting older; most of it is a matter of laziness and the knowledge that I can go next year if I put it off this time.

By now you wonder what the trials and tribulations of a hack outdoor writer have to do with you. I'll tell you.

If you consider retiring in Florida and spending your time fishing, your problem will be just the same as mine. You'll have all the time you want for your fishing and unless you play it smart you'll get pretty bored.

For one thing, you must be sure, danged sure, you're a fisherman. If you haven't been able to fish before your retirement (no matter what you worked at), the chances are you don't really have much interest in fishing. Don't tell me you didn't have time. If you want to fish badly enough you'd have found time somewhere along the line.

The thoughts of fishing are pleasant. A picture of a man relaxed under a palm tree with a fishing rod across his knees is highly attractive to another man working hard, worrying hard, and wading the slush of a prolonged northern winter.

I'm not throwing off on palm trees and relaxation, but just how long do you think you could sit under a palm tree with a fishing rod and retain your sanity?

I'm not throwing off on fishing either, but it isn't a guarantee of full-time joy unless you're a special kind of person. Let's study the procedure of becoming a full-time fisherman.

(Continued on next page)

By CHARLES WATERMAN

Photo By Mike Fogarty

A man has to work at fishing to keep from getting bored. The happiest retiree fishermen are those who become specialists in some phase of the sport, like fly fishing at right. But if he didn't fish before he retired, a man won't work at it later on.

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The old business of getting out what you put into it was never more true of anything. Without exception, all of the happy fishermen I know are good at some phase of it and became good through practice—or work, if you prefer that word.

The most dissatisfied fishermen I encounter are those who refuse to learn anything on their own. Often they can afford all the guides they want and confine their own skills to deciding when to go and how long to stay. I know some of these fellows who can return from a dream trip to some exotic fishing spot without being able to answer the simplest questions about the method used.

"The guide knew where to go," they say, never considering the reason why that was the place or how the guide had decided.

Some of these folks will fish with guides out of the same dock for years and never learn the first thing about the country. When one of these fellows says he always uses tackle furnished by the guide, I immediately suspect he isn't much of a fisherman. Nearly all good fishermen want their own tackle, and assembling it is part of the sport. Anyway, these people complain a lot about the fishing and couldn't stand very many days of it.

I am not belittling these casual fishermen, but I'm pretty sure that any one of them would have a hard time spending his retirement at fishing. If you fit in the category, don't buy yourself a one-way ticket to a bass lake. Better have some other hobbies.

I don't believe in competitive fishing, but there must be some kind of a challenge.

I know a wealthy man who retired to Florida to fish. He bought a deep water cruiser and went out every day, trolling for sailfish, kingfish; anything that was striking. He became pretty good at it after a couple of years during which he fished the Gulf Stream as regularly as a charter skipper. His friends got tired of it and he didn't care to go alone. The last I heard of him he was working in a welding shop for amusement.

If he'd been forced to steal time from a job to maintain and operate his boat, he'd probably have had a lot of fun at it. With nothing else to do, it got tiresome in a couple of years.

Some of the happiest retirees become artists at one specific kind of fishing. I know a retired merchant who has become a fly fishing expert and fishes all over the world using nothing but his fly rod. He catches a lot of fish not usually considered fly fish and has a lot of fun doing it. He sets himself some pretty tough tasks and is enjoying life.

Before settling permanently, consider the many fishing options; tarpon and bonefish below, are tops in the Keys and southwest coastal section; bass, right, are the big inland attraction. If you've got a strong preference for either, then you'll want a home that's near the locale of that fish!

Florida Department of Commerce Photos

On the other end of the expense account is a man who fishes daily at a pier, specializing in flounder when they're running and going for pompano when they're available. His skill at these two kinds of bait fishing is dramatic although neither is ordinarily considered a "fancy" game fish. His fun is comparable to that of the fly fisherman.

Another retired angler I know has gradually gained greatest satisfaction from building tackle, especially lures.

None of these specialties is particularly easy, and all take a great deal of study and practice.

Few fishermen who want to use only the easiest and simplest methods become serious fishermen. Call it ego or self-satisfaction or what you will, there is little fun in doing something that everyone else can do just as well. The novelty soon wears off.

A roller coaster thrills or scares almost everyone, but riding one would probably never develop into a satisfactory hobby because someone else is running the thing.

A lot of people go fishing with no abilities at all. The guide makes the cast and gives them move for move instructions when a fish strikes. The customers may have a wonderful time, but they're like the roller coaster passengers and it's a dull fellow indeed who wants someone else to do all of his casting for him year in and year out.

But suppose you're a real fisherman and you've definitely decided you want to retire to Florida and fish. You still have some decisions to make. Your best move would be to spend an entire year in the state before buying a home or otherwise settling permanently. There's as much difference between bass fishing in the Florida panhandle and bonefishing in the Keys as there is between Maine salmon and yellowtail off California.

Your first reaction is to find something similar to what you had at home. For example, when I came to Florida, I was primarily a black bass fisherman so I sought bass fishing country.

A year of indecision is expensive but more desirable than settling where you don't care for the fishing. I know a fellow who bought a home on salt water thinking he'd learn to fish there. He knows now that the light tackle fishing he's used to just doesn't fit in with his new residence. There are other parts of the state where he'd have a wonderful time, but he has to drive hundreds of miles to get to them.

Any fisherman who comes to Florida should study the kinds of fishing carefully. There are more than you think. I have repeatedly mentioned the fellow who fished in Florida for 12 years before he learned he could catch salt water fish with his bass tackle, the fellow who still thinks he has to go north for fly fishing and the bass fisherman who has lived 20 years within two miles of salt water trout fishing without trying it, driving 30 miles for bass fishing.

I have always been against hurried selection of a retirement spot.

Right now there is a boom in fishing classes, fishing clinics and schools. A fisherman intending to retire to Florida should make every effort to attend any of them he can reach. He may be bored stiff, but he'll invariably learn something.

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The need for this sort of thing is spotlighted in some of the housing developments where the staff is hard put to keep new retirees from going to seed in a strange place—no matter how gracefully the palms sway or the water ripples. The developers are seriously into the fishing school and learning fast.

Not everyone retiring to Florida is young enough or healthy enough to do just any kind of fishing he wants to. Doctor's orders may seem to prohibit almost all angling, but chances are there is some skillful fishing the person with limited physical capabilities can do.

Patients are too skimpy with the information they give their doctors. I know a heart patient who doesn't want to cast very much because his doctor told him not to, but he turns around and yanks violently on a stubborn outboard because his doctor never said anything about that. He should know better.

So what's the easiest fishing?

Probably bridge and pier fishing with bait takes the least work. You can do it with a chair and you can be on shore quickly.

However, rowing a light boat is less taxing than rapid walking. Persons with health problems should be careful in handling and starting outboard motors. Carrying even light motors or attaching them to boats is not wise for semi-invalids. Electric starting motors certainly take little exertion, but long range boating could become strenuous in case of a breakdown or bad weather, and someone in such a party should be capable of manual effort.

I have frequent inquiries from persons who aren't able to do strenuous labor but can cast or troll. They're worried mainly about boat handling and trailering.

Well, a carefully matched outboard boat and trailer can be launched with little effort and recovered almost as easily if the operator takes his time on the winch (which can be geared so low it's virtually no effort).

Elderly persons will be wise to keep their boats large enough that they can move around a little. Any boat of less than 12 feet gets pretty tiresome for an all day trip, even for a youngster.

What kind of tackle?

Contrary to popular belief, there is little difference in the physical exertion of spin-casting, open reel spinning, plug casting or fly fishing once the skill is learned. Fly fishing is considerable labor at first and many beginners don't get past the hard work stage. The spin-casting or push button is easiest to learn but no less work than regular bait-casting once skill is acquired. I believe the open-face spinning reel, although simple to learn, requires somewhat more physical effort than either plug casting or fly fishing. At least it does for me.

But some of it you gotta do for yourself. ●

Photo By Gene Smith

So what's the easiest, least physically taxing fishing method for a retiree, or anybody else? Bank, pier and dock fishing, as this content, Northwest Florida lake fisherman illustrates. Many prefer bridge fishing, but, there might not be space for a chair—and traffic's heavy!

Photo By Leonard Lee Rue III

Great Horned Owl

By ELIZABETH ADLER

Whoo . . . whoo whoo . . . whoo . . . whoo?

The great horned owl, that's who. The rhythm of the hoots was the key. They were those of an owl more often heard than seen.

"Not here," I exclaimed aloud, "in this buzz of activity!"

To the east, I was within a stone's throw of well-traveled U.S. Highway 19 through Crystal River; 50 yards to the west, men were systematically destroying natural habitat (in the name of progress, of course). Bulldozers had leveled the land, whirring chainsaws were dismembering fallen trees, and the noisy, staccato pounding of carpenters' hammers reverberated as they went on building homes.

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Simultaneously, my ear caught the deep, resonant, uninflected hoots of the great horned owl, tones that echoed and re-echoed like the utterances of one who loves the sound of his own voice.

Almost unbelieving, I stood beneath a tall pine and began to feel empathy with that owl. In this the 20th century those notes could have been the bird's complaint against the building of more homes for man and the nonstop destruction of the homes of wildlife. I thought of Gray's "Elegy":

". . . from yonder ivy-mantled tower
The moping owl does to the moon complain
Of such, as wandering near her secret bower,
Molest her ancient solitary reign."

Another series of hoots. I moved cautiously along a stand of pines in the direction of the sound and searched the branches intently. A dragonfly buzzed around my head. Dead limbs cracked under foot, and a hissing, snapping sound overhead betrayed the presence of the bird. Suddenly, I was eyeball to eyeball with *Bubo virginianus,* the Great Horned Owl.

Although his eyes are 100 times more sensitive to faint light than man's, and his eardrums larger than those of any other bird, he permitted me to get within 30 feet for a photograph. This delicately feathered, marble-eyed bird, ranging 18 to 25 inches in length, had his enormous feet anchored to a stark pine branch. The outer toes, which are reversible, flipped nervously back and forth. He raised himself to full height and with a flourish elevated both his tufts. With piercing yellow eyes fixed on me in an expression of judgelike solemnity, he moved his entire body to keep me in view. As I focused my camera he angrily snapped his beak, and the first click of the shutter sent him off in noiseless flight to denser woods.

Aware that the haunts and habits of the great horned owl are not too well known, I had hoped to uncover further evidence that this stand of conifers was his home; that he was not "a bird in flight with only time to shake a quill at you."

I studied the trees, the ground, and the underbrush as I walked to the far edge of the woods. At ground level, in every direction, small orange streamers hung from surveyors' stakes. Bold black numerals presaged the subdivision into small lots and the coming of still more new homes. Looking up, I spied in the crotch of a pine a large, carefully made nest of sticks, old leaves, feathers and moss. It appeared empty, although there were signs of recent refurbishing.

It is known that great horned owls seldom make nests for themselves, preferring instead abandoned hawk, osprey, or squirrel abodes. It was the new look of moss and outer twigs, less weather worn, that held my interest. Could this be the nest of the great horned owl I'd seen?

From every possible angle I studied that nest. Just as I was deciding that whatever bird had called it home had been driven off, I detected movement. I froze in my tracks and watched. First one and then another fuzzy head pushed up. What ensued for the next 10 minutes was a comedy sketch by two baby owls that would have gladdened any heart.

Over the rim of the nest four eyes stared down with a sapient look. One owlet and then the other climbed up and teetered precariously on the edge. They turned their backs; they faced me; they hid behind each other; and one fell backward, recovered, and positioned himself to peek around the other. It looked as though one body had two heads. Then, either tired of their antics or aware of my presence, they suddenly compressed their feathers close to their bodies, elevated their small ear tufts, and appeared to grow as I stood watching. After the stretching exercise they both disappeared into the nest as completely as performers on stage behind a rung down curtain.

From that moment an unforgettable experience began to unfold for me. Discovery of the nest and the owlets made me a self-appointed babysitter for them during the next three months. Ensuing visits were most rewarding as I returned daily to observe, make notes and learn.

At the end of the fourth week the nest was empty. Scattered beneath the tree were a few feathers, small bird claws, little bones, and a segment of a dead snake. My heart sank. I stared at the ground then knelt down to examine the remnants closely. I looked hopefully upward to the nest. It really was empty. A pine cone dropped at my feet. Glancing upward again I was jubilant. Next to a hollow in the gnarled old trunk sat mother owl feeding one of the owlets a piece of snake. What had first been mistaken as evidence of a tragedy was simply the hard pellets regurgitated by the owls—indigestible leftovers from their diet. The owlets were safe!

Great horned owls, being primarily nocturnal, do most of their hunting at night, preferring rabbits and rats as food. Occasionally they will kill and eat a skunk, apparently unfazed by that animal's powerful repellent.

Interested in what the owlets were being fed, I searched for pellets under all the trees, and, when found, examined them closely. The composite of the diet, judging from the remnants, consisted of mice, small birds, fish and snakes. Besides bones and claws there were feathers, fish scales, and pieces of snake skin in the hard pellets.

Continuing to watch the area, I noted the owlets had abandoned their nesting tree. A full week of visits and neither sight nor sound indicated their whereabouts. I was certain they had fledged, but when? And where had they gone?

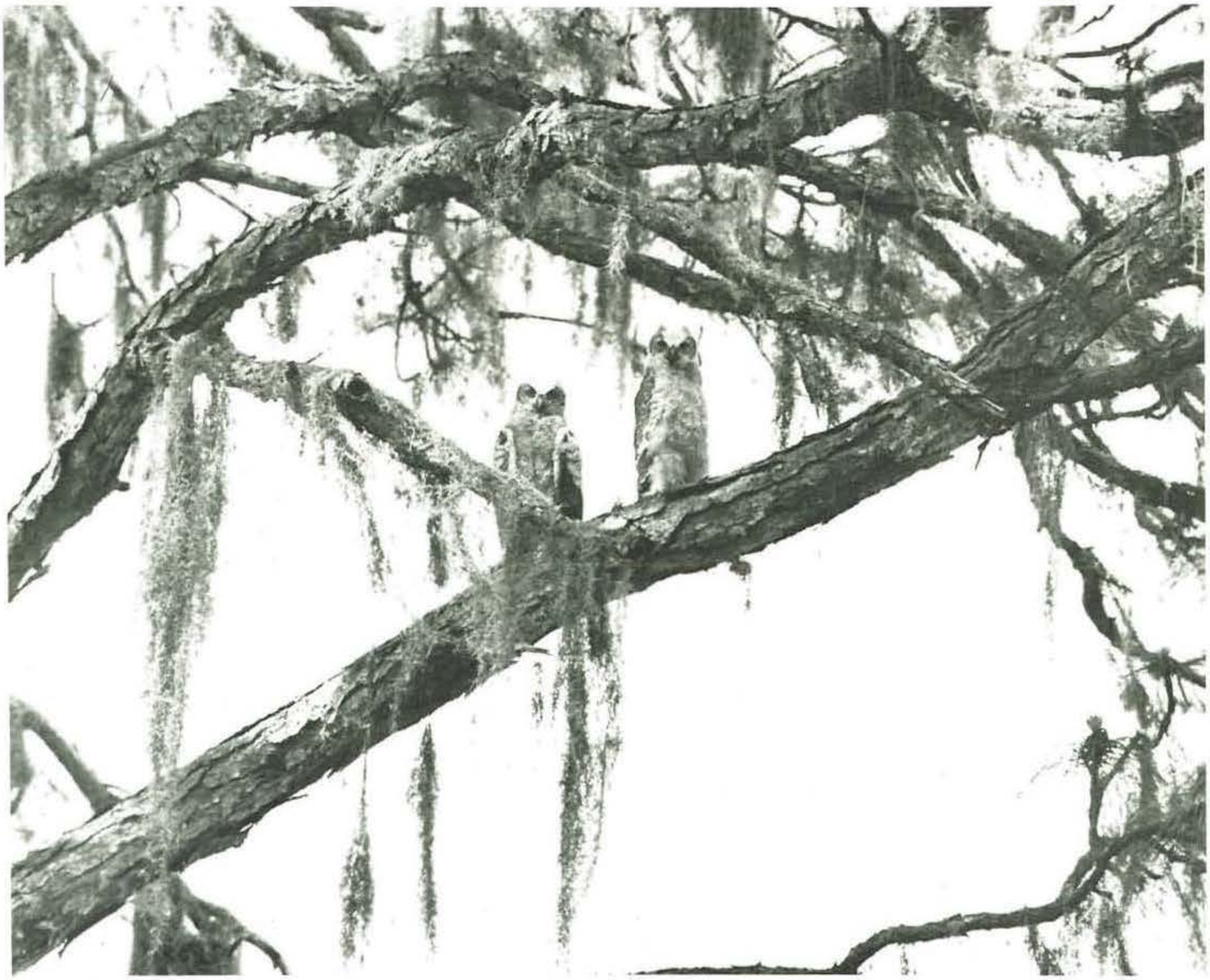

Photo By Elizabeth Adler

Young horned owls posed for formal portrait just prior to graduating to perils and responsibilities of young adulthood. They seemed both curious and cautious; never relaxing that piercing stare. They first flew at 10 weeks old.

An owl's first flight is within nine or 10 weeks. I reviewed my notes. Guessing the eggs were laid in late February, I allowed 26 to 30 days for the incubation period, and checked the date of discovery of the nest. They were right on schedule.

Fresh pellets on the ground would be a clue. I combed the area for several days and finally walked back to the old pine where I first had seen the parent bird. There on the very same branch of the very same tree, far removed from the nest, a great horned owl sat beside its offspring, keeping a watchful eye. The youngster stretched his wings over and out, over and out—like morning situps. Time and again he flapped his wings frantically in an effort to keep his balance. Yes, he could fly, and was a good distance from his natal tree! The mother, ever watchful, sat immobile, and with a typically stoic expression. She resembled an owl freshly mounted by a taxidermist.

On what proved to be my last visit before the owls departed, no watchful eye of a parent was evident. I found the young birds sitting side by side. Their breasts appeared as whitish bibs of soft, downy feathers. The markings on their wings were very distinct—a rich brown, spotted with darker browns and black. The female was preening her feathers as they both sidestepped down the limb out of the dense foliage. They stopped in front of me, turned toward each other as though making confidential aside remarks, readjusted their positions, and sat secure and serene. Had they been able to talk, I had the feeling they would have said "We're ready. We're about to leave. Take our picture now."

I longed to hear the young owls try their voices, as I had watched them trying their wings. But they only sat in dignified, and sometimes drowsy, silence. They are gone now, and the tree that held their home will be destroyed in another year. *La dolce vita* for the great horned owl, fast being deposed throughout much of its "ancient solitary reign," will be no more unless more of us begin to give a "hoot" about his future. ●

Game Management Notes

A TOTAL of 252,271 resident licensed hunters went after 10 game species and three unprotected species during the 1971-72 hunting season in Florida, and harvested the following: 48,900 deer, 25,800 turkeys, 1,712,700 quail, 1,458,000 squirrels, 38,700 wild hogs, 522,500 ducks, 2,219,300 doves, 204,800 snipe, 12,300 woodcock, 319,500 rabbits, 5,000 foxes, 61,400 raccoons, and 6,800 bobcats. The sportsmen spent a combined total of 5,451,500 days hunting.

These figures are the results of the Game Management Division's annual Wildlife Inventory, Harvest, and Economic Survey, conducted through a random mail survey of Florida hunters at the close of each season. The study is done with federal aid funds under the Pittman-Robertson program administered by the Division of Federal Aid, U. S. Fish & Wildlife Service. Also cooperating is the Southeastern Fish & Game Statistics Project at the Institute of Statistics, North Carolina State University, Raleigh, N. C.

Detailed figures on the harvest, by administrative regions in the state, indicate that the deer kill was heaviest in the Northwest with 13,400, followed in order by Northeast—10,400; Central—9,900; Everglades—8,000; and Southern Region—7,200.

The wild turkey tally looked like this: Northeast—6,400; South—6,100; Northwest—5,600; Central—5,200; and Everglades—2,600.

Quail hunters took 521,500 birds in the Southern Region; 344,600 in the Northeast; 325,100 in the Central Region; 308,300 in the Northwest; and 213,200 in the Everglades.

Wild hog hunters racked up 12,800 porkers in the Central Region; 11,800 in the South; 6,900 in the Everglades; 4,100 in the Northwest; and 3,000 in the Northeast Region.

Dove hunting during the first phase of Florida's 3-way split season produced 299,400 birds in the Central Region; 267,600 in the South; 262,900 in the Everglades; 163,300 in the Northwest; and 115,400 in the Northeast. But the total harvest of doves for the entire season was greatest in the South with 686,400, followed by Central Region with 473,900; Everglades with 430,400; Northwest with 378,000; and Northeast with 250,500 doves.

Statewide, the sales of resident licenses, by region, were: Northwest—58,949; South—52,519; Northeast—50,704; Central—50,618; and Everglades—39,481.

On the average, it required 34.47 hunting days to bag one deer; 17.41 days per wild turkey; and 10.97 man-days hunted to get a wild hog, according to the survey.

Resident licensed hunters receiving questionnaire post cards are urged to cooperate by filling in the information requested so that accurate statistics can be obtained on the results of the '72-73 hunting season. The basic trends in wildlife populations, as revealed by the year-to-year mail survey, provide information of extreme value and importance to wildlife biologists and administrators.

Michael J. Fogarty, of Gainesville, is the project leader of the Florida hunter-harvest survey, Federal Aid Project W-33-22.

Photo By Jim Reed

Gator nesting, hatching success, survival, and growth rates are under study by Commission biologists in the Everglades.

Twenty-five sites containing alligator nests were located by aerial search in the north portion of the Everglades Wildlife Management Area last summer, according to wildlife research biologists Mike Fogarty and James Schortemeyer, assistant project leaders of the Commission's alligator ecology project, another of the Pittman-Robertson federal aid studies.

"Other active sites were observed, but not all could be monitored," said the biologists, who reported that "fourteen sites had one nest with eggs; seven had a nest with eggs and a false nest; three had only false nests (one of these sites had four false nests); and one site had two nests with eggs.

"Clutch size for 21 alligator nests averaged 30.4 eggs per clutch and varied from 4 to 46 eggs. This was below the five-year weighted average of 32.9 eggs per clutch.

"All but two nests were opened by the female gator, for a hatching rate of 91.3%. A 4-egg nest and a 21-egg nest were not opened. These clutches were not viable—the smaller clutch contained two eggs showing no evidence of embryonic development and the others contained a 7½-inch and a 2-inch fetus, respectively. None of the 21 eggs in the other nest showed any development.

"Ten eggs were removed from each of six nests late in incubation to measure per cent fertility. These were placed in styrofoam chests containing nesting material from the original nests. Of the 60-egg sample, 32 hatched. The remaining 28 eggs which failed to hatch were opened, and none showed any signs of development.

"No natural predation was observed at the nest sites monitored. This may have been the result of the drought and fires during April 1971 reducing the predator population." ●

Lead and Steel

it appears that before long ammo makers will be geared to supply duck hunters with the long-sought lead shot substitute—at a price

By EDMUND McLAURIN

WATERFOWLERS CAN EXPECT to change their ways soon, at least with respect to the shotshell loads they use.

This coming hunting season, hardware and sporting goods stores will be offering shotshells loaded with soft steel shot. Such loads are already in manufacture and being shipped to dealers.

The new steel shot loads are expected to be the coming thing for waterfowling—not because they are superior to lead shot loads, but for the reason that the Bureau of Sport Fisheries and Wildlife of the U.S. Department of the Interior is expected to decree that hunters can legally shoot nothing but steel shot at migratory waterfowl.

Since the days of market hunters, countless thousands of tons of lead shot have been deposited over our wetlands. There has been a gradual and ultimately enormous but unseen buildup because lead does not deteriorate like some metals. Also, modern hunters are adding fresh deposits of up to 12 million pounds of lead shot to the marshes annually.

Where the expended pellets do not sink into bottom ooze beyond feeding depth, ingestion by waterfowl can result in poisoning and serious annual mortality. Biologists say we are losing at least 4% of our annual waterfowl population to lead poisoning resulting from ingested shot picked up in heavily hunted waterfowl feeding areas. The percentage may not seem significant, but when added to losses from natural causes and to the legal hunting season harvest, the losses to lead poisoning take on more importance. The problem has been known, and a solution sought, as far back as 1936.

The National Wildlife Federation is putting heavy pressure on the Bureau of Sport Fisheries and Wildlife for a regulation that the use of steel shot loads be required. That's why shotshell manufacturers are busily engaged in producing and shipping shells loaded with steel shot. They don't want a "steel shot only for waterfowl" ruling by the BSF&W, to catch them and their dependent retail dealers unprepared.

While our large shotshell makers are now in position to economically produce many thousands of pounds of lead shot daily, they do not as yet have facilities for making soft steel shot. Most are purchasing ready-made shot from the Superior Steel Ball Company, New Britain, Connecticut, which is expected to supply 2 to 3 million pounds of steel shot to major shell manufacturers like Remington, Winchester, and Federal before summer ends.

Each lot of steel shot delivered must meet ballistic laboratory specifications of the receiving company. Steel shot cannot be too hard or they will quickly score and ruin a shotgun's bore and choke. If a shipment of steel shot should prove too hard when tested, as frequently occurs, that particular lot must be annealed to needed degree before it can be used in shotshell production. Each resulting process, of course, adds to production cost.

Conceivably, the retail selling prices of shotshells loaded with steel shot may be substantially higher than those of conventional lead shot loadings.

Lead has long been the ideal metal for use in sporting ammunition, particularly shotshells. It is plentiful, fairly cheap in comparison to other metals, and is easily shaped in manufacturing operations.

But more importantly, lead has desirable sectional density (weight in relation to mass) that gives lead pellets the flight range and retained velocity that results in penetration over ballistically calculated practical shooting ranges.

Conversely, a steel shot is lighter than a lead pellet of the same diameter. Being lighter, steel shot pellets lose velocity much sooner than lead pellets.

Also, it takes more steel shot to equal the same weight of lead shot, and standard shotshell gauge sizes are such that only so much suitable powder and shot can be crammed into a given space. So far, 1⅛ ounces has been the maximum capacity steel shot load that manufacturers have been able to put into a standard 12 gauge shell. In contrast, most waterfowlers have long used shotshells containing 1¼ ounces of harder hitting lead shot.

Most assuredly, with steel shot the effective killing range will be shortened. There will be more long-range missing, and more crippling of birds shot at beyond 50 yards.

While steel shot often will produce kills on par with lead shot out to 40 yards range, performance of the steel pellets falls far below that of the lead variety at longer ranges. Field tests indicate that the average hunter can expect only 18 kills per 100 targets fired on at 60 yards maximum range when using large size steel shot, compared with a poten-

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tial kill of 34 birds out of a hundred shots when firing lead shot of the same size.

In the new steels, shot sizes smaller than No. 4 are virtually ruled out for successful waterfowl hunting.

Tests by Remington show that in the new steel shot loads shot size No. 3 is best for ducks and size BB for geese—and with shooting range reduced to 40 yards for sure kills! This will be quite a change for those waterfowlers who have long been using lead shot sizes 4, 5 and 6 on ducks with killing effect well beyond 40 yards. The retained velocity and penetration qualities common to these three popular sizes of lead shot loads are simply not to be had from steel shot in sizes 4, 5 and 6.

These are not haphazard conclusions, but findings based on extensive field tests conducted on National Wildlife Refuges located along Atlantic, Mississippi, Central and Pacific waterfowl flyways, on Winchester's Nilo Game Farm in Ohio, and at Remington Farms in Maryland, during the 1972 waterfowl hunting season.

In field tests, hunters used shotshells loaded with lead shot on certain hunting days and loads containing steel shot on others. The results were tabulated by on-the-spot observers.

The Fish and Wildlife Service painstakingly reviewed the findings. Undoubtedly, there will soon be a Federal decree that only steel shot loads will be legal for waterfowl hunting. National wildlife and conservation groups are pressuring the BSF&W into such action. Seemingly, it matters not to advocates that the use of steel shot may easily fail to reduce waterfowl losses—due to a greater tendency of steel shot to cripple birds shot at distances beyond 50 yards, and that steel shot cannot yet be produced economically.

In use, steel shot can be rough on some of our shotguns. Gun steel used in the trade varies considerably in hardness. Some barrel steels are not up to handling steel shot. When passing through our gun barrels, steel shot will not have the resilience of lead. There is not much latitude for individual pellet realignment or for compacting "give" during passage through the bore as occurs with lead pellets. Consequently, the steel shot charge develops a peening effect against the barrel interior, especially on choke.

One major manufacturer of high quality shotguns sadly predicts that the new steel shot loads will drastically reduce the useful life of his product.

Meanwhile, there is hope in the ammunition manufacturing trade that solid copper shot may eventually prove more practical than steel and give results comparable to lead shot loads. Copper has greater sectional density than steel but less than lead. Unfortunately, copper is a relatively expensive metal to purchase in raw form and process. Retail prices of shotshells loaded with solid copper pellets would undoubtedly reflect substantial increase over the costs of today's lead shot-loaded shells, and be even higher than the inflated prices already set for the new steel shot loads.

It is almost sure that the use of lead shot for waterfowl hunting will soon be *verboten*.

One of the most useful and enjoyed items I've carried hunting the last fifteen years has been a folding aluminum-frame stool that has a five-color camouflage canvas seat, a zippered carry-all bag underneath, extra compartments on each side and end, and an adjustable carrying strap that permits the lightweight stool to be carried in almost any fashion.

In the bag section of the stool, I usually carry all the assorted items a fellow needs afield, depending on the type of hunting or archery activity being enjoyed.

Such stools are made by Kamo, Black Sheep, L. L. Bean and others, and are priced about the same. Their versatility is impressive. A stool will serve its owner in many ways.

Frames are usually formed from two sections of aluminum tubing given inverted, open-U shape and held together where they cross by an aluminum rivet, with each leg end capped with a rubber crutch tip.

The Bean product, however, does not have four legs, but is comprised of rectangular sections that are crossed and riveted to pivot to form the stool's frame. Although I do not own one, I consider the Bean stool stronger and more stable, because of continuous, closed-frame construction, without four individual legs to press unevenly into soft ground and thereby cause variable stress on the stool frame every time the hunter shifts his weight, as he will surely do during long sitting sessions. In time, a four-legged aluminum frame will usually bend lopsided and, although easily pulled back into shape, thereafter will tend to bend often.

To strengthen the sections forming my four-legged stool, I obtained a strip of ¾-inch wide by ⅛-inch thick aluminum and bolted cut sections to the stool to achieve the same design and effect as the Bean product. I've not since had any trouble with frame bending.

Two narrow, buckle-type leather straps were also added, to provide for outside strapping on of sweater or poncho. When not in use, the two straps are kept wrapped around the stool's tubing, near the seat—weighing almost nothing, and out-of-the-way, but there when needed.

I usually carry my stool slung over one shoulder, with the strap shortened until the folded stool seems to fit nicely under my arm and against my side.

The modified folding stool has proven to be both a practical accessory and a contributor to personal comfort while occupying a deer stand for long, often cold hours. It has also served as an excellent and comfortable seat in many a dove field.

The aluminum frame stools can be had with choice of ordinary canvas seat and bag or insulated vinyl for carrying iced drinks. The insulated type is noticeably bulky. I much prefer the canvas model. A small vacuum bottle can always be carried in the main compartment.

You cannot imagine the convenience and comfort of such a stool until you have used one under various hunting conditions.

If I ever build a new home, it is going to have some sort of soundproofed range for home target practice with .22 caliber rifle and handgun. From talks with architects, I know that installing one at the level of the living area would be costly, but a tunnel-like range built below floor level and running underneath the house is feasible, I am told.

There would have to be some sort of ventilated, acoustic-tiled booth at the firing point, then a large, long pipe of heavy steel duct formed from steel girders through which shots could be fired at illuminated targets at the far end. The tunnel would be backed with an angled steel plate and sand box, or a commercial bullet trap.

Even though the firing booth would be walled with sound-absorbing tile, I'd wear muff-type hearing protectors of the kind favored by handgunners who fire noisy, large-caliber pistols in competition. Within the confines of a small booth, even a .22 would have an acutely sharp report. Wearing the protectors would assure ear comfort and protection of hearing when firing.

A 50-foot range utilizing standard NRA targets for that distance would be preferable, but if I didn't have room for that, I would settle for a 35-foot range and use targets with slightly smaller bullseyes.

An entry trapdoor to the shooting booth would have to be made in the house's floor, and some sort of pulley arrangement incorporated in the duct or tunnel to permit targets to be put at the far end and retrieved.

All firing would be done with rifle or handgun muzzle inserted some three or four inches in the firing tunnel. This would aid firing safety in the booth, and a bullet-catching, bulletproof backstop would control all fired shots at the target point. Range safety to home premises and neighbors would be 100%, but even so I quite likely would have to get special permission from city authorities for construction and operation.

But such a range *could* be built and safely operated, I am told. Perhaps some day I can build one.

How and where to set up a portable indoor firing range seems to be the interest and objective of numerous readers, judging from letters we receive. In some instances, home firing practice is the goal; in others, organized groups wish to establish and maintain simple, safe indoor ranges where .22 calibers can be shot one or two nights a week.

In every community there is usually at least one place where indoor range facilities can be set up for either 50-foot or 75-foot firing of .22 rifles. Provided the range is constructed with safety the paramount consideration, a suitable site can sooner or later be found.

During World War II, I coached groups of ambitious riflemen chosen by the Department of the Army to receive special schooling for instructors. A public school gymnasium was used for practice firing between regularly scheduled athletic activities. This was accomplished by designing roller bases for the heavy bullet traps used so they could be quickly wheeled into and removed from service. Similarly, the even heavier 5 x 5-foot sheets of steel plate faced with wood were put on strong rollers so they could be pushed into position to form a long, bulletproof backstop behind the several bullet traps.

Additional safety was achieved by locking all side entrances to the gym, and also rigging up an electrical safety device whereby all lights at the targets would automatically go out if a door were opened or if anyone should attempt to find better spectator position on sidelines instead of well behind the firing point.

In all, 411 persons fired more than half a million shots on the improvised indoor range without an accident or near-accident of any kind.

Two types of ready-made bullet traps are commercially available—a type that catches fired bullets and dissipates their energy by combined friction and centrifugal force, and an impact type that stops bullets when they hit a steel plate set at an angle that deflects remaining particles into a sandbox or lead-receiving reservoir. Either type can be used singly or in multiple arrangement with or without attached light brackets.

For a long time X-Ring products (until its manufactures were taken over by Outers Laboratories, Inc., Onaluska, Wisconsin 54650) furnished schools and clubs the centrifugal-type of bullet trap in both table and pedestal models. The University of Florida, Memphis City Schools, Georgia Military College, and the Missouri State Highway Patrol were among early users. Outers Laboratories can supply you with detailed information and prices.

The impact-type of bullet trap finds practical, convenient form in the portable Sheridan models, made in several sizes by Sheridan Products, Inc., Racine, Wisconsin 53403. One catalog listing—although portable—will safely stop .38 caliber pistol bullets. Sheridan traps are widely used.

The National Rifle Association, 1600 Rhode Island Avenue, N.W., Washington, D. C. 20036, publishes more than a dozen illustrated booklets on construction of safe shooting ranges, from simple to elaborate, and both indoor and outdoor types. ●

Wildlife Officer Notes

GUNS, LIGHTS, game law violators, and wildlife officers don't mix. Sgt. J. K. Davis and wildlife officers Paul Gaffney and Archie Maynard, of the Everglades Region, arrested six adults and two juveniles in two separate incidents the first weekend in April, according to Lt. G. Ross Parsons, regional information-education officer, West Palm Beach.

Seized as evidence were two deer (a doe and a buck), two motor vehicles, and an assortment of firearms.

All the arrests were made in Palm Beach County.

Three men were charged with taking or attempting to take deer at night with the use of gun and light. They were arrested by officers Gaffney and Maynard on the L-8 dike in the north end of the county, following several hours of observation in the early hours of Saturday morning.

Booked were John Franklin Cove, Roger Floyd Ready, and Robert Mack Yarborough, all of Boynton Beach. A juvenile apprehended with them was turned over to detention center authorities.

The officers seized two 30-06 rifles, a .410 gauge shotgun, a .22 caliber pistol, and a 1965 Buick as evidence in the case, and those charged were released after posting bonds of $1,000 each.

Within eight hours, Wildlife Officer Gaffney and Sgt. Davis apprehended Manuel Fraga and Hermenegild Cardenas, of Hialeah, and Augustin Novoa, of Miami, with a 15-year-old juvenile, on the Talisman Sugar Company property. The three adults were charged with unlawful possession of game during closed season and contributing to the delinquency of a minor.

Evidence seized in this case included the two deer carcasses, a 30-30 rifle, and a 1970 Ford pickup truck.

Bonds for this trio were also set at $1,000 each, and the juvenile was released to the custody of his parents.

The six men will be tried at a later date.

Florida hunters are advised and requested to obtain certification as "Florida Safe Hunters" before next fall, especially if they plan to travel out of state to hunt.

Seventeen states and four Canadian provinces now require visiting nimrods to have proficiency certificates from their home states, or else spend part of their vacation or hunting time completing a similar course prior to being issued a hunting license.

"Whether hunting at home or elsewhere, we want Florida hunters to enjoy their sport," said Captain James Carter, state hunter-firearms safety coordinator for the Commission. "The important aspect is that you hunt safely and follow the marks of good sportsmanship. Florida's firearms safety program can and will help you become a safer hunter and a better outdoorsman," he said.

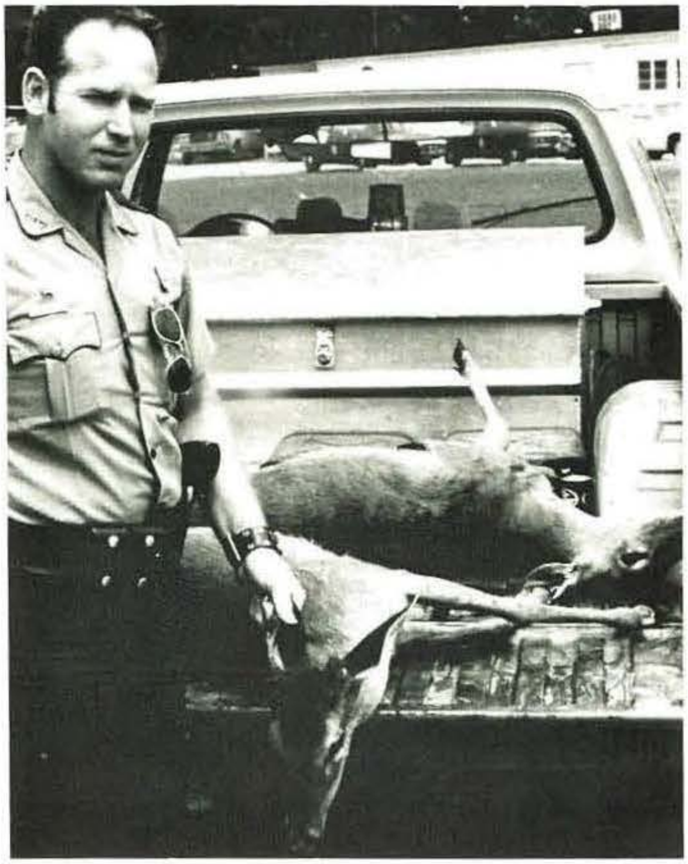


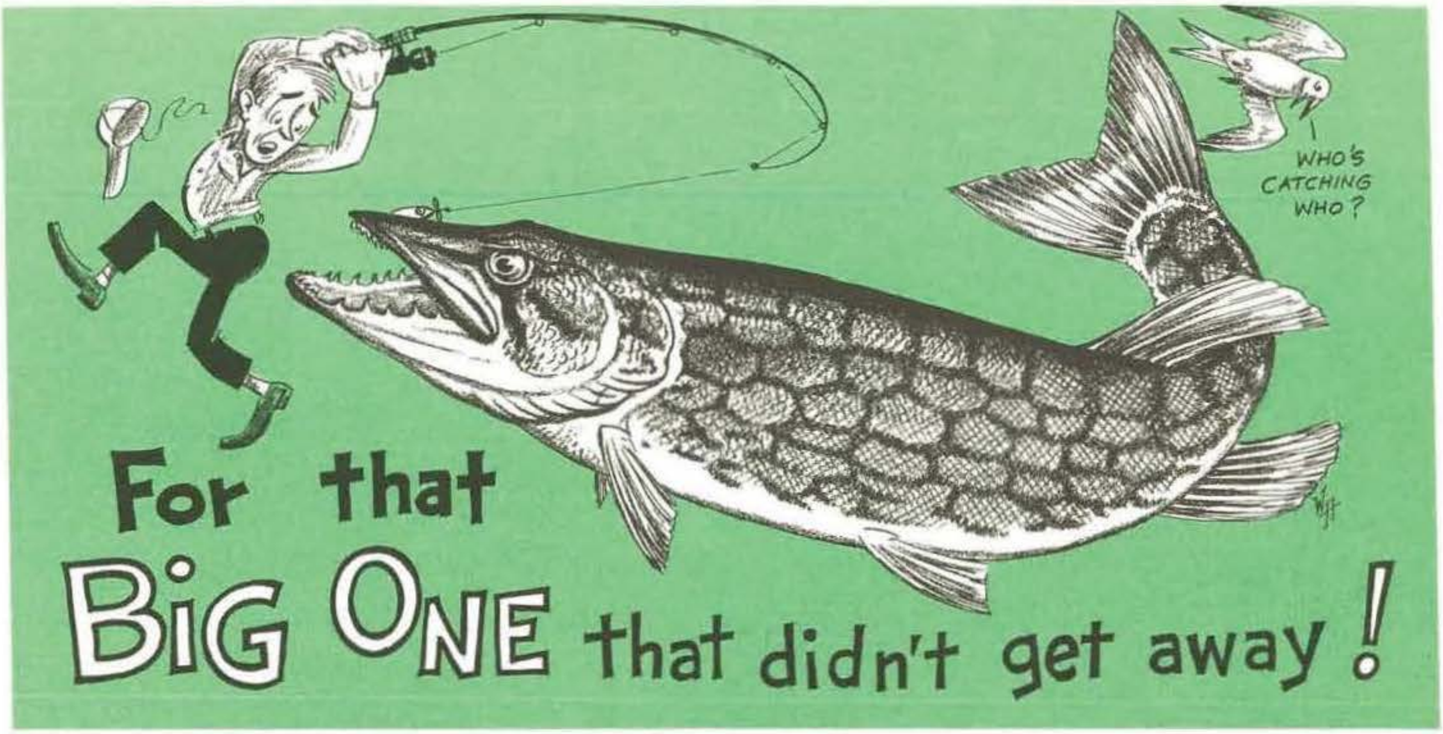
Photo By Ross Parsons

Some days a wildlife officer can't go wrong—and makes or helps in two major game law violation cases. Paul Gaffney of Palm Beach County, shown above with two evidence deer, knows the feeling. Caught within hours were eight persons in two groups, miles apart. Of eight, two were juveniles.

The 10-hour Commission course of instruction and practice covers the entire spectrum of hunting and firearms safety, including basic operating principles of a firearm, safe gun handling, marksmanship, wildlife identification, field first aid, survival, and modern game management techniques. The course also includes actual firing on a rifle range, a simulated hunt to field-test each student's skills as a safe hunter, and a written test. An optional class on archery is offered for those interested in the growing sport of bowhunting.

For additional information on the Florida Hunter and Firearms Safety program in your area, contact Capt. Jim Carter at 5950 W. Colonial Drive, Orlando, Florida 32808.

Those states now requiring safe hunter certification are: California, Colorado, Connecticut, Delaware, Minnesota, Montana, New Hampshire, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, South Dakota, Utah, Michigan, Washington and Kansas; the Canadian provinces: British Columbia, Manitoba, Ontario and Quebec.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Young Bluejay

Photo By Leonard Lee Rue III

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